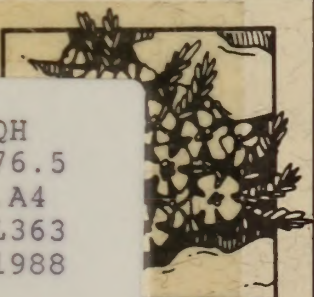
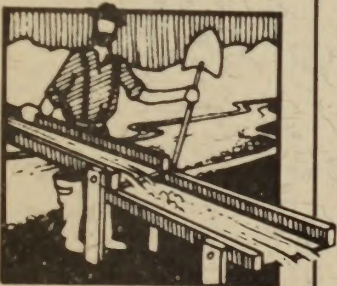


SEPTEMBER 1988



Fort Wainwright

Draft Resource Management Plan

Draft Environmental Impact Statement

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**DRAFT RESOURCE MANAGEMENT PLAN
AND
ENVIRONMENTAL IMPACT STATEMENT
FOR THE
FORT WAINWRIGHT MANEUVER AREA**

Lead Agency: U.S. Department of Interior, Bureau of Land Management

Cooperating Agency: U.S. Army, 6th Infantry Division (Light)

Type of Action: Administrative

Abstract: This document presents five alternative resource management plans for the Fort Wainwright Maneuver Area. The Military Lands Withdrawal Act of 1986 establishes the primary uses of this land as military maneuvering and training. The alternatives in this plan present a variety of combinations of proposals addressing the issues of military use, economic development, recreation, wildlife habitat, and access. The "no action" alternative would continue current management. The other alternatives represent a range of choices emphasizing military use, habitat protection, recreation, and economic development.

There is a ninety-day comment period for the public to review and convey their opinions on this document. Comments will be accepted until December 1, 1988 at:

Military Withdrawals Planning Team
Office of Management, Planning and Budget (918)
Bureau of Land Management
Box 13
701 C Street
Anchorage, Alaska 99513

Those who wish to comment by phone may call Jim Ducker, the team leader, at (907) 271-5595.

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July 15, 1988

Dear Reader,

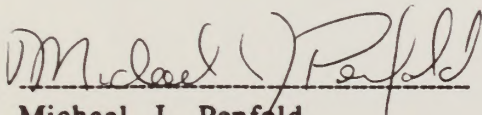
The planning effort reflected in this draft report is a first step to fulfilling the mandate of the Military Withdrawals Act of 1986. The document is the result of work by a joint BLM-Army planning team. It acknowledges the primary military purpose of the withdrawn lands, yet it presents a variety of alternatives for nonmilitary uses.

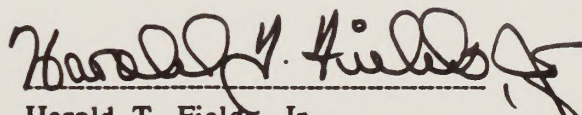
The alternative ultimately chosen as a part of this planning effort will guide management of nonmilitary activity on these lands until the withdrawal expires in 2001. Consequently, your comments on the options presented in this document could have ramifications into the next century. *We urge you to consider the alternatives carefully and forward written comments to:*

Military Withdrawals Planning Team
Office of Management, Planning and Budget (918)
Bureau of Land Management
701 C Street
Box 13
Anchorage, Alaska 99513

You also may make comments by calling Jim Ducker, the team leader, at (907) 271-5595 by December 1, 1988, or by attending a public meeting at Fairbanks on November 16.

All comments received within the ninety-day comment period, which ends December 1, 1988, will be addressed in the final RMP/EIS, which is scheduled for completion in June 1989. You should retain this draft document, because portions of it may not be reproduced in the final RMP/EIS.


Michael J. Penfold
State Director
Bureau of Land Management


Harold T. Fields, Jr.
Major General, U.S. Army
Commanding

EXECUTIVE SUMMARY

This draft Resource Management Plan/Environmental Impact Statement was prepared in accordance with the Military Lands Withdrawal Act of 1986. It recognizes the primary military role of this withdrawal and presents alternative management direction for nonmilitary uses consistent with the withdrawal's major purpose. The issues addressed in this document--military use, economic development, recreation, wildlife habitat, and access--as well as the criteria for preparing the plan, benefited from public comment in the late summer of 1987.

This volume poses five alternative management scenarios.

Preferred Alternative

The Preferred Alternative seeks to maintain the public's current access to the withdrawal and examine ways to promote use of forest, recreation, and mineral values without undermining the military's mission.

Alternative A

Alternative A is the "no action" alternative, which would provide essentially the same management which currently exists on the withdrawal.

Alternative B

Alternative B presents a program which gives the military the greatest flexibility to use the withdrawal without interference from nonmilitary users.

Alternative C

Alternative C promotes recreational use of the withdrawal.

Alternative D

Alternative D offers a series of actions designed to enhance the economic benefits derived from the withdrawn lands.

TABLE OF CONTENTS

Abstract	i
Letter to the Reader	iii
Executive Summary	v
Table of Contents	vii
List of Maps	viii
List of Tables	ix
List of Abbreviations	x

INTRODUCTION

Purpose and Need for Action	1
Location	1
Issues	2
Scope of the Planning Document	4
Criteria	4
Preliminary Injunction	5

CHAPTER 1: ALTERNATIVES

Introduction	7
Military Activities and Constraints on Alternatives	7
Management Common to All Alternatives	8
Preferred Alternative	13
Alternative A	21
Alternative B	25
Alternative C	29
Alternative D	35

CHAPTER 2: AFFECTED ENVIRONMENT

Introduction.	53
Socioeconomic Conditions	53
Air, Soil, Water, and Vegetation Conditions	55
Fish, Wildlife, and Their Habitat.	60
Cultural Resources	62
Recreation	62
Lands and Rights-of-Way	64
Energy and Mineral Resources	65

CHAPTER 3: ENVIRONMENTAL CONSEQUENCES

Introduction	67
Development Scenarios	67
Environmental Consequences	
Common to All Alternatives	71
Environmental and Military	
Consequences of the Preferred Alternative	73
Environmental and Military	
Consequences of Alternative A	79
Environmental and Military	
Consequences of Alternative B	81
Environmental and Military	
Consequences of Alternative C	85
Environmental and Military	
Consequences of Alternative D	87
Summary of Section 810(a) ANILCA	
Findings for All Alternatives	89
Unavoidable Adverse Impacts	89
Short-term Uses versus Long-term Productivity	90
Irreversible and Irretrievable	
Commitments of Resources	90

**CHAPTER 4: PUBLIC PARTICIPATION AND
GOVERNMENT CONSULTATION . . . 91****APPENDICES**

A. List of Preparers	95
B. Bibliography	99
C. Index	103

LIST OF MAPS

	facing page
Area Map	2
Closed Areas	8
Roads and Major Trails	10
ORV Use	14
Fire Management Categories for the Preferred Alternative and Alternatives B and D	20
Visual Resource Classification for Alternatives C and D	30
Fire Management Categories for Alternative C	34

LIST OF TABLES

Summary of Alternatives	39
Activity Projections 1990-2001 for Each Planning Alternative	46
Summary of Environmental and Military Consequences	48

LIST OF ABBREVIATIONS

ADF&G	Alaska Department of Fish and Game
AFB	Air Force Base
AFTAC	Air Force Technical Application Center
ANGTS	Alaska Natural Gas Transportation System
ANILCA	Alaska National Interest Lands Conservation Act
BLM	U.S. Bureau of Land Management
CFR	Code of Federal Regulations
DBH	diameter at breast height
DOI	Department of the Interior
DOT/PF	Alaska Department of Transportation and Public Facilities
EIS	Environmental Impact Statement
F&WS	U.S. Fish and Wildlife Service
F.M.	Fairbanks Meridian
FMP	Forest Management Plan
GVW	Gross Vehicle Weight
HMP	Habitat Management Plan
NEPA	National Environmental Policy Act
ORV	off-road vehicle
P.L.	Public Law
RAMP	Recreation Activity Management Plan
RMP	Resource Management Plan
RS	Revised Statute
TAGS	Trans-Alaska Gas System
TAPS	Trans-Alaska Pipeline System
VRM	Visual Resource Management
YMA	Yukon Maneuver Area

INTRODUCTION



- | | |
|---|-----------------------------|
| 1 | Purpose and Need for Action |
| 1 | Location |
| 2 | Issues |
| 4 | Scope of Planning Document |
| 4 | Criteria |
| 5 | Preliminary Injunction |

Introduction

Purpose and Need for Action

This plan is designed to determine the appropriate mix of nonmilitary activities and uses which parts of Fort Wainwright can support, while at the same time permitting the military's important training functions. The Bureau of Land Management (BLM) undertook this planning effort at the direction of Congress and the Secretary of the Interior. The Military Lands Withdrawal Act of 1986 (P.L. 99-606) required the Department of the Interior (DOI) to prepare land use plans for the Fort Wainwright Maneuver Area, commonly known as the Yukon Maneuver Area, by November 6, 1989. This legislation renewed the withdrawal on these lands which were originally withdrawn in 1961. The new withdrawal is for fifteen years for "military maneuvering, training, and equipment development and testing." Congress called upon the DOI to develop a plan for the life of the withdrawal which recognized the preeminence of the military's mission, yet included provisions necessary for "proper management and protection of the resources and values" on the withdrawn lands. It specifically suggested that the plan address the possibilities for wildlife and wildlife habitat protection, recreational use, and mineral development.* Upon adoption of the plan, BLM and the Army will draft a Memorandum of Understanding to implement the plan.

Location

The Yukon Maneuver Area is a tract of approximately 248,000 acres lying in the Fairbanks North Star Borough southeast of Fairbanks. The maneuver area is roughly rectangular in shape, spanning twenty-eight miles east-to-west and seventeen and one-half miles north-to-south. It encompasses much of the land between the Chena and Salcha rivers northeast of the Richardson Highway. Tributaries of these two rivers flow through the area at the bases of two-thousand-foot hills, which predominate all but the extreme western portion of the maneuver area. Entrance into the withdrawn lands from the Richardson Highway can be gained

* The act also calls for consideration of continuation of grazing. However, grazing does not occur on Fort Wainwright. Similarly, some topics normally addressed in resource management plans and environmental impact statements, such as prime and unique farmlands, wild horse and burro management, and land acquisition are not discussed because the resource does not exist on, or the action is inappropriate given the nature of, the withdrawal.

at two points: through the main gate of Eielson Air Force Base, which is wedged between the highway and the maneuver area about twenty-six miles from Fairbanks, and via Johnson Road, which intersects the highway about ten miles south of Eielson's main gate.

Issues ---

This draft Resource Management Plan focuses on resolving issues. An issue for this withdrawal is a perceived concern, need, problem, conflict, or opportunity related to the use or management of Fort Wainwright's lands and resources. Issues for this plan are constrained by the withdrawal legislation which stated that military use is to remain predominant. The issues described below--military use, economic development, recreation, and access--are derived from a review of existing planning and management documents, suggestions from interdisciplinary planning team members, BLM and Army policy and management, and public comment. The discussion below gives the background for each issue and a set of questions focusing on specific points related to the issue.

Military Use

The withdrawal is used for a variety of military purposes described in some detail in Chapter 3. These require facilities such as firing ranges, impact areas, landing strips, and training and maneuver areas. Future military use may require changes to existing facilities or additional facilities. Military and other human intrusions can disrupt wildlife and their habitat. Several archeological sites exist within the withdrawal, and continued protection of these sites precludes some military uses. While this plan cannot plan for or restrict future necessary military activities, it can recommend those steps the military should take to protect resource values, and it can determine actions which should be taken to enhance the military's ability to use the lands.

1. What areas or resources are especially sensitive or important and merit special protection from military activities?
2. What measures should the military take to minimize its adverse impact on resources?
3. How can hazardous material sites, if any, be identified, and how can the public be protected from them?
4. Which archeological and historical sites should be excavated or relocated to allow for military use of these areas?

Fort Wainwright Military Withdrawal


DRAFT

Resource Management Plan

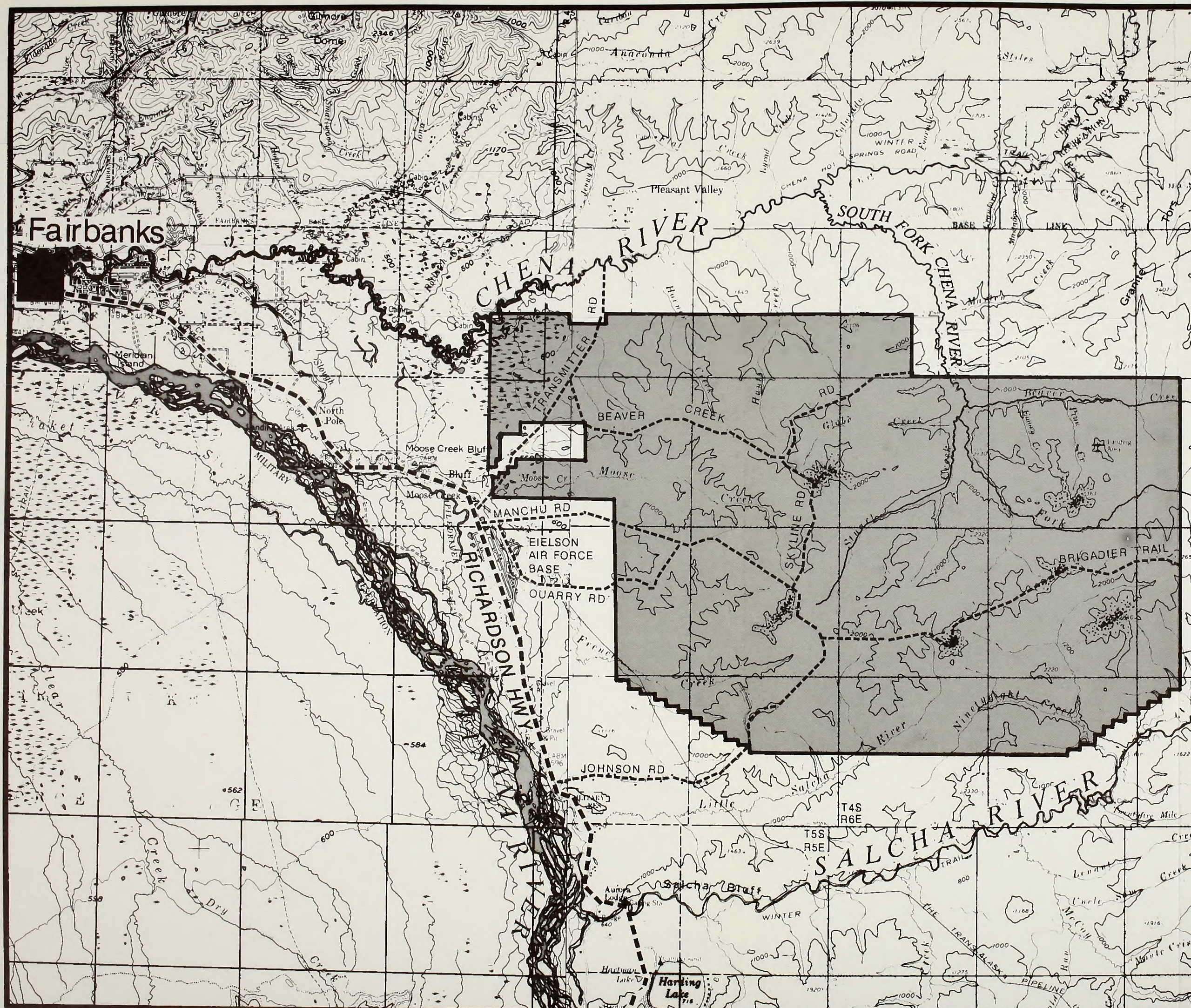
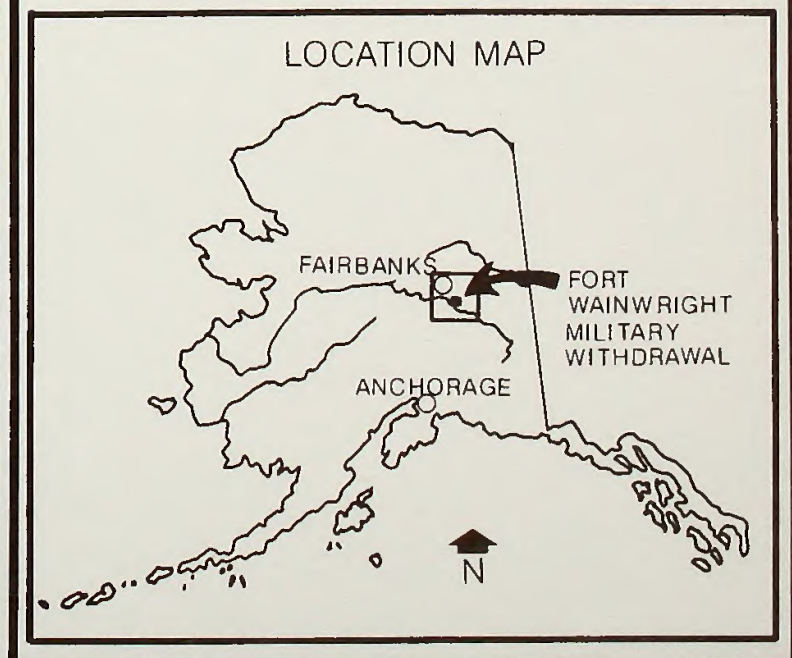
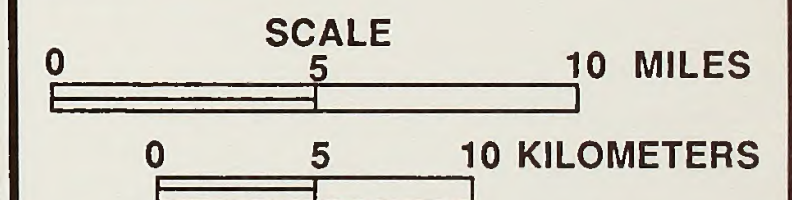
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Environmental Impact
Statement

AREA MAP

 Fort Wainwright
Military Withdrawal
(Yukon Maneuver Area)

 Elevations greater than
2,000 feet



**Economic
Development**

The withdrawal is closed to mineral entry and location, and to mineral leasing. Section 12 of the Military Lands Withdrawal Act of 1986 instructs the Secretary of the Interior, with the concurrence of the Secretary of the Army, to determine which lands are suitable for opening to the operation of the Mining Law of 1872, the Mineral Lands Leasing Act of 1920, the Mineral Leasing Act for Acquired Lands of 1947, the Geothermal Steam Act of 1970, or any more such acts. There also is public interest in the commercial use of the Fort Wainwright withdrawal for trapping and forest products.

1. Should exploration and development of locatable, leasable, and salable minerals be allowed, and under what conditions and mitigating measures?
2. In what areas and under what physical and environmental conditions should forest products be made available?
3. In what areas and under what circumstances should opportunities for guiding, trapping, and other commercial activities be allowed?

Recreation

The withdrawn lands hold valuable opportunities for both consumptive and nonconsumptive recreation. Hunting, trapping, and fishing currently occur in the area, as do such varied activities as berry picking, off-road vehicle operation, wildlife viewing, trail hiking, and gold panning. A portion of the State-operated Chena River State Recreation Area abuts the withdrawal.

1. To what extent can recreational activities be accommodated in the withdrawal?
2. What, if any, recreational facilities are needed and appropriate for the withdrawn lands?

Access

The type of public access and the extent and purpose of any access within the withdrawal needs to be addressed. Any development of recreation or economic opportunities will require access.

1. What access should be provided for consumptive and nonconsumptive resource uses?
2. For what areas should ORV use be permitted, prohibited, or limited?
3. To what extent can recreational use via aircraft be accommodated?

Scope of the Planning Document

The identification of these issues does not diminish the need to address the impact of management decisions on all other resources. The resource management plan is guided by the issues, but it must be comprehensive in its scope. Consequently, while Chapter 1 will focus on the alternate scenarios for addressing the issues, Chapter 2 will give a summary of all the affected environment and Chapter 3 will consider the alternatives' impacts on the environment's broad spectrum of values.

Criteria

The following criteria were used in the development of the resource management plan. They helped direct the planning effort in compliance with all applicable laws, regulations, and policies. The planning team submitted these criteria for public comment through a Notice of Intent and a widely distributed brochure in July 1987, and in public meetings at Delta Junction and Fairbanks in the following month.

1. All nonmilitary activities on the withdrawals will be subject to conditions and restrictions necessary to permit military use of the land.
2. Valid existing rights will be protected.
3. The plan will consider plans and policies of adjacent land owners and local governments.
4. The plan will consider wildlife and wildlife habitat, control of predatory and other animals, recreation, prevention and appropriate suppression of fires from nonmilitary activities.
5. Wildlife and wildlife habitat will be managed consistent with a 1986 cooperative agreement between the Army, the Alaska Department of Fish and Game, and the U.S. Fish and Wildlife Service.
6. The plan will consider opening of lands to the mining laws.
7. Public access needs will be addressed, though military necessity, security, and public safety dictate that general public access will not be permitted on certain portions of the withdrawals.

8. Subsistence uses and needs will be considered in accordance with Sec. 810 of the Alaska National Interest Lands Conservation Act.
9. The plan will make no wilderness suitability recommendations.
10. The plan will utilize existing data, information, plans, and land use analyses.
11. BLM and the military will cooperate in preparing the plan which will be limited to resources and uses under BLM's administration and control.
12. The plan will specify decisions to the maximum extent practical and minimize the preparation of more specific activity plans.
13. The plan will not address contamination by military weapons and their decontamination as issues. Sec. 7 of the Military Lands Withdrawal Act establishes the Army's responsibilities for these actions.

Preliminary Injunction

On February 10, 1986, Judge John H. Pratt issued a preliminary injunction order in the National Wildlife Federation v. Burford, et al., Civil Action No. 85-2238 (D.D.C. 1985). This injunction, effective February 15, 1986, enjoined the Bureau of Land Management from:

- "a. modifying, terminating, or revoking, in full or in part, under the Federal Land Policy and Management Act, any withdrawal or classification that was in effect on January 1, 1981, or
- b. taking any action inconsistent with the specific restrictions of a withdrawal or classification in effect on January 1, 1981, including, but not limited to, the issuance of leases, the sale, exchange, or disposal of land or interests in land, the granting of rights-of-way, or the approval of any plan of operations."

This military withdrawal may be affected by the lawsuit. Implementation of recommendations in the final plan may be affected by order(s) of the court.

1. The purpose of this study was to determine the effect of the use of the X-ray in the diagnosis of the disease.

2. The study was conducted in the following manner: A group of 100 patients was selected from the hospital records. The patients were divided into two groups: one group was treated with the X-ray and the other group was treated without the X-ray. The results of the treatment were compared.

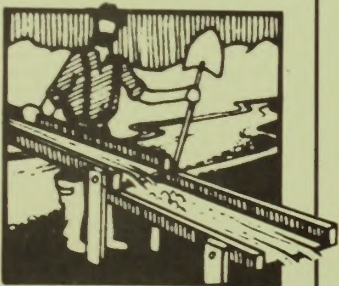
3. The results of the study were as follows: The patients who were treated with the X-ray showed a higher percentage of recovery than the patients who were treated without the X-ray. This was true in all cases.

CONCLUSIONS

4. The study has shown that the use of the X-ray in the diagnosis of the disease is of great value. It is recommended that the X-ray be used in all cases of the disease.

5. The study has also shown that the use of the X-ray in the treatment of the disease is of great value. It is recommended that the X-ray be used in all cases of the disease.

6. The study has shown that the use of the X-ray in the diagnosis and treatment of the disease is of great value. It is recommended that the X-ray be used in all cases of the disease.



CHAPTER 1 ALTERNATIVES

7	Introduction
7	Military Activities and Constraints on Alternatives
8	Management Common to All Alternatives
13	Preferred Alternative
21	Alternative A
25	Alternative B
29	Alternative C
35	Alternative D

Chapter 1

Alternatives

Introduction

Both the National Environmental Policy Act (NEPA) and BLM's resource management planning regulations require the formulation of alternatives. Each alternative in this document represents a complete and reasonable plan to guide future management of public land and resources. Each alternative identifies and presents for public comment, combinations of public land uses and resource management practices that address the issues. One alternative, Alternative A, represents "no action." As defined in the planning regulations (43 CFR 1610.4-5), no action means a continuation of present levels or systems of resource use. The other alternatives provide a range of choices in management emphasis.

Military Activities and Constraints on Alternatives

The Military Lands Withdrawal Act of 1986 mandates that the Department of the Interior plan for the nonmilitary uses and resources of the withdrawal. The alternatives presented here focus on the nonmilitary potential of the Fort Wainwright withdrawal; they do not propose various scenarios for the military's conduct of their mission. In accordance with the Act, the alternatives recognize the military's primary role on the land. Consequently, the planning team has limited all alternatives to those nonmilitary uses and resources which are viable within the constraints necessary for protecting national security, ensuring public safety, and providing for foreseeable military requirements for training and maneuvering.

Stuart Creek Impact Area

The Stuart Creek Impact Area is a roughly six-mile square tract into which the Army and Air Force fire munitions. The Air Force conducts over 230 days of training a year in the air space above the Yukon Maneuver Area (YMA); its heaviest activity occurs in the impact area along Stuart Creek where it has a mock enemy airstrip, targets, and electronic sensors to score their training activities. Some of the ordnance expended in the area has produced, and continues to produce, unexploded duds. Disturbance can cause these duds to explode. The Air Force intends to use laser and laser-guided weapons on the Stuart Creek Impact Area. Lasers can damage vision if

they strike the eye. The military rarely enters the impact area, and does so only after taking stringent precautions. Under similar controls and conditions and within the parameters of the various alternatives, some nonmilitary users may gain access to the area. However, because of the dangers inherent in traveling in the impact area and the wide and unpredictable areas needed for casual uses such as hunting, fishing, and trapping, none of these or any other casual or recreational activities would be allowed under any alternative in the impact area.

AFTAC Site

The Air Force Technical Application Center or AFTAC lies immediately east of Transmitter Road in the northwest section of the YMA. The Air Force operates a series of ground sensors continuously on the AFTAC to detect seismic disturbances. Because local ground disturbance can disrupt these instruments' readings, public access to the area is restricted.

Training Areas

Most of the YMA is designated as training areas. The western third of the withdrawal receives the greatest use because it is the easiest part for troops to reach, but the Army trains on all parts of the tract outside the impact area and the AFTAC site. The YMA is the most convenient military land for ground training of soldiers at Fort Wainwright, especially during the summer when it is particularly expensive and time-consuming to attempt training on the portions of Fort Wainwright south of the Tanana River. Some training, particularly combined arms live fire exercises which normally occur twice a year, preclude civilian access to parts or all of the withdrawn lands. The ongoing conversion of the Army's presence in Alaska from battalion to division size would increase the need for training on the YMA.

Management Common to All Alternatives

Management Actions

The following management actions are ones which BLM and the Army consider appropriate to all the new alternatives proposed in the following pages and which, explicitly or implicitly, are the current policy or practice on the withdrawal. In some cases these action statements stand on their own; in some instances statements in the various alternatives give further direction in how they are to be accomplished.

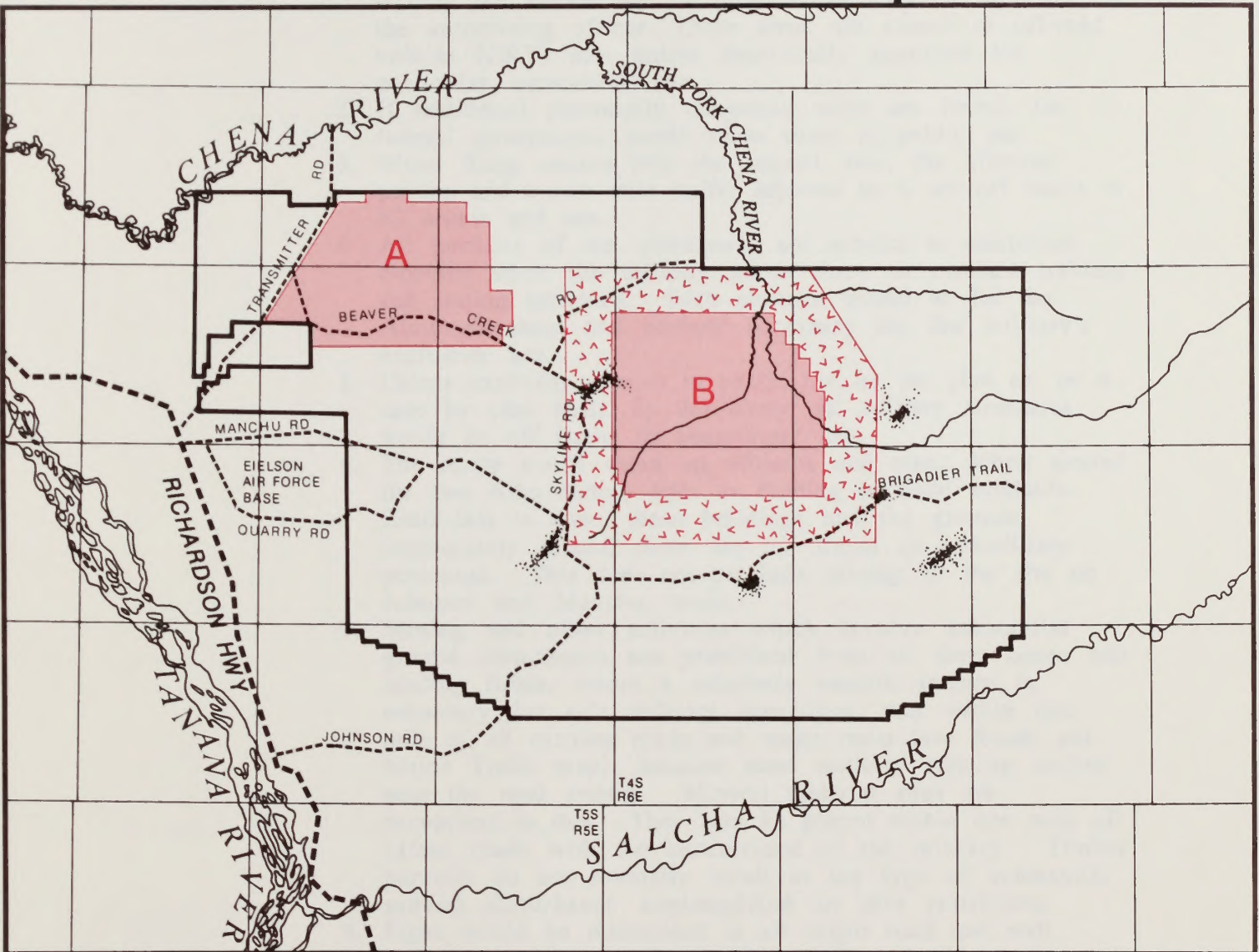
Access

1. Due to the dangers of unexploded munitions inherent in impact areas, the Stuart Creek Impact Area is closed to all public access and use. Because of the national security interest in not disturbing the ground in the AFTAC site, it too is closed to all public access and use. (See Closed Areas map.) Noncasual uses, such as mining, timber harvest, and

Fort Wainwright

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DRAFT Environmental Impact Statement

Closed Areas



Legend



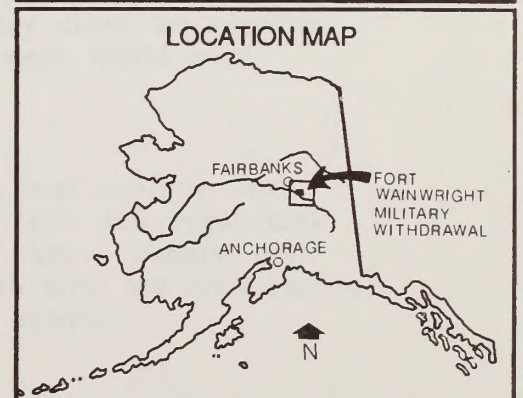
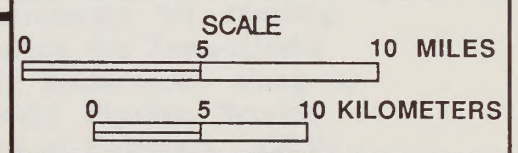
Closed to all nonmilitary activities:

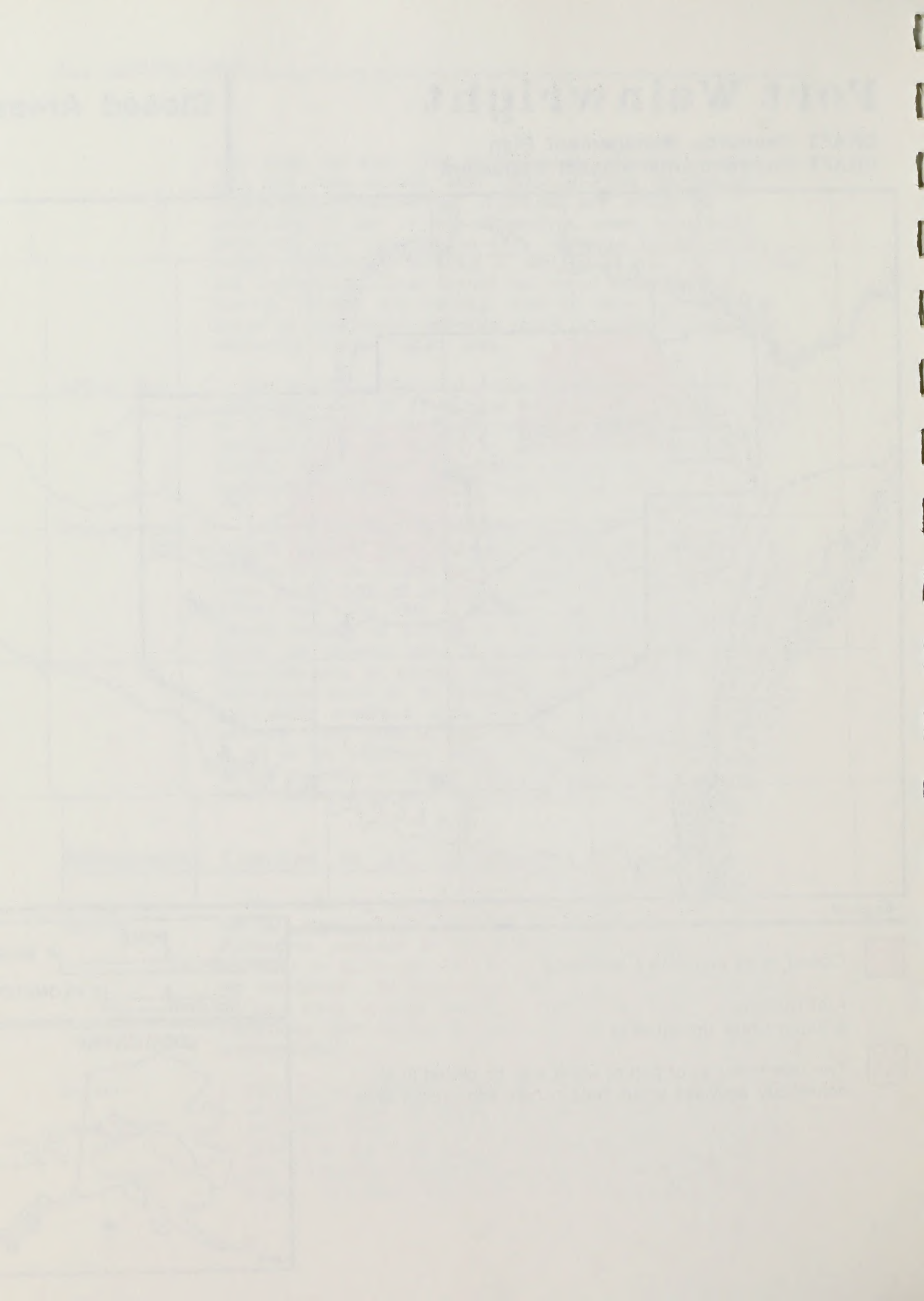
A-AFTAC Site

B-Stuart Creek Impact Area



Two mile buffer all or part of which may be closed to all nonmilitary activities when firing occurs into impact area





scientific investigations, may be conducted in these areas if they are allowed by the plan and if they are approved by the authorizing officer. These areas are closed to off-road vehicle (ORV) use, unless specifically approved for particular noncasual use.

2. If additional potentially dangerous sites are found, the federal government would close them to public use.
3. When firing occurs into the impact area, the affected portion and a two mile buffer adjacent to it are off limits to all access and use.
4. All portions of the withdrawal are subject to temporary closures when the military needs them to conduct training and testing activities. Such closures would be for the minimum areas and periods necessary for the military's exclusive use.
5. Unless explicitly opened to public use by the plan or, on a case by case basis, by the Army, all military structures would be off limits to nonmilitary use.
6. The Army would clean up asbestos and other debris around the two Nike battery sites as funding is made available. Until this is done, these buildings and the grounds immediately around them are off limits to nonmilitary personnel. This does not preclude driving by the site on Johnson and Manchu roads.
7. Mining and other activities which involve substantial ground disturbance are prohibited from all drop zones and landing fields, where a relatively smooth surface is necessary for safe military operations, and within one mile of all existing roads and major trails (see Roads and Major Trails map), because most military training occurs near the road system. Mineral material sites are exceptions to this. They may be placed within one mile of extant roads with the concurrence of the military. Timber harvests do not normally result in the type of substantial ground disturbance contemplated in this restriction.
8. Signs would be maintained at all major road and trail entrances to the withdrawn lands. The signs would identify the property and the requirements for entering.
9. No ORVs would be allowed to run along the Trans-Alaska Pipeline System's work pad used for maintenance along its line without the permission of Alyeska Pipeline Service Company, BLM, and the District Corps of Engineers. ORVs weighing less than 1,500 pounds may cross the pipeline. ORVs weighing more than 1,500 pounds would need approval to cross the pipeline.

**Air, Soil, Water,
and Vegetation**

Nonfederal uses of the withdrawal must conform with applicable federal, state, and borough laws and regulations concerning protection of air, soil, and water. Federal uses would comply with federal law, and with state and local law to the extent consistent with the federal mission.

All proposed activities, military and nonmilitary, for the withdrawn lands are evaluated, under the authority of Army Regulations 200-2 and NEPA, for impact on air, soil, water, and vegetative resources.

Application of all herbicides and pesticides would only be conducted in accordance with the Fort Wainwright Pest Control Plan and all applicable laws and regulations.

Fish and Wildlife Habitat

Pursuant to the Sikes Act, the 6th Infantry Division (Light) has entered into a Cooperative Agreement with the U.S. Fish and Wildlife Service (F&WS) and with the Alaska Department of Fish and Game (ADF&G). The agreement calls for the development of fish and wildlife management programs which, within the constraints of the Army's needs to fulfill its mission, would improve habitat, determine "the extent of equitable military and nonmilitary access" to harvesting and enjoyment of fish and wildlife on the withdrawal, arrive at a consensus on the "need and means for controlling, protecting, stocking, or restoring" desirable species on the post, and develop with F&WS and ADF&G an inventory of fish and wildlife resources on the YMA. BLM associates itself with these responsibilities through adoption of a Resource Management Plan and associated implementing Memorandum of Understanding. BLM would participate with the Army, F&WS, and ADF&G in developing these programs through a Habitat Management Plan for the withdrawal and would join as a signatory agency in any revision of the Cooperative Agreement.

Forestry

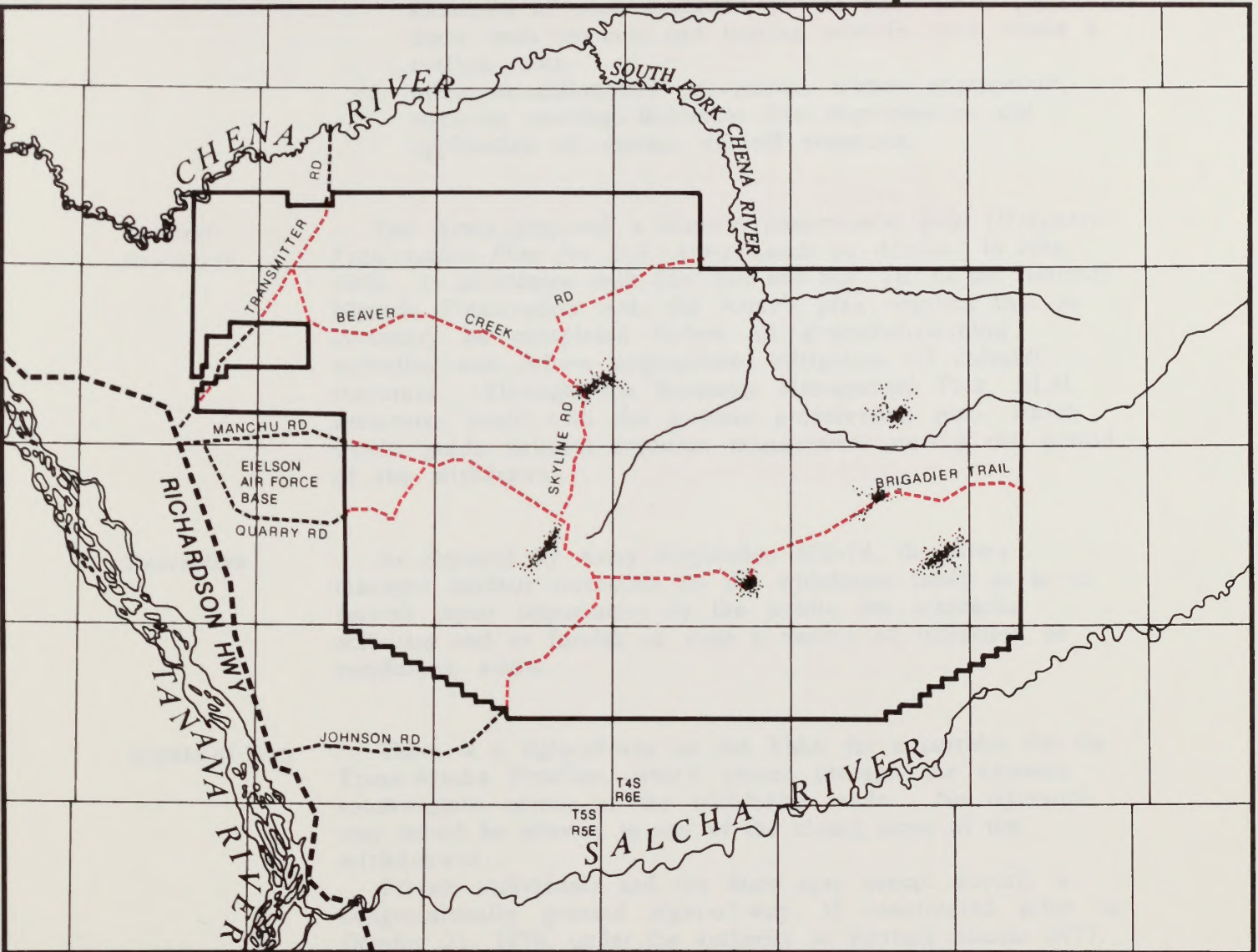
Common BLM timber management practices and contract stipulations would apply to any sale of timber on the withdrawn lands. Common requirements include:

- a. the construction, improvement, and maintenance of safe and environmentally sound road systems. Loggers may be required to properly locate and install culverts, stabilize cuts and fills, and properly grade roads.
- b. the felling and yarding of timber in such a way as to protect soil and water quality, residual trees, and human safety. Some provisions may be aerial yarding to protect fragile sites, limbing before yarding to protect residual trees or soil or water quality, and directional felling to protect buffer strips, streams, and adjacent stands.
- c. the treatment of a logged site to prepare it for the next generation of trees. Some ways to prepare a site are to rip compacted skid roads, abandoned haul roads, and landings and to scarify, slash, pile, and underburn the logged site.
- d. the disposal of logging slash for silvicultural and/or fire hazard reduction purposes.

Fort Wainwright

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DRAFT Environmental Impact Statement

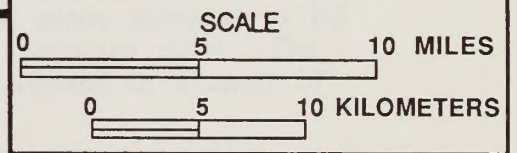
Roads and Major Trails



Legend



Roads and major trails



- e. mitigation measures for protecting wildlife habitat. Examples of some measures are the removal of debris dams from streams, and leaving wildlife trees within a cutting area.
- f. other miscellaneous provisions, where appropriate, such as meeting minimum fire requirements and application of disease control measures.

Cultural Resources

The Army prepared a historic preservation plan (*Historic Preservation Plan for U.S. Army Lands in Alaska*) in June 1986. In accordance with Sec. 106 and Sec. 110 of the National Historic Preservation Act, the Army's plan requires that an inventory be completed before all ground-disturbing activities and, where appropriate, mitigation of cultural resources. Through this Resource Management Plan, BLM associates itself with the historic preservation plan, which would guide cultural resource management during the period of the withdrawal.

Recreation

As required by Army Regulation 420-74, the Army manages outdoor recreation on the withdrawn lands so as to furnish equal opportunity to the public for recreation activities and to furnish as wide a variety of recreation as conditions allow.

Rights-of-Way

There is a right-of-way on the YMA for a corridor for the Trans-Alaska Pipeline, which passes through the extreme southwestern corner of the withdrawn lands. No rights-of-way would be allowed in any of the closed areas of the withdrawal.

Private individuals and the State may accept directly a congressionally granted right-of-way, if constructed prior to October 21, 1976, under the authority of Revised Statute 2477. The federal government would work cooperatively with the State to identify all rights-of-way claims made pursuant to RS 2477 on public lands for administrative purposes only. The validity of such claims can only be determined in a court of competent jurisdiction.

Minerals

Pursuant to Public Law 85-767, mineral materials (sand and gravel) may be removed from the YMA to help in the construction and maintenance of public highways, subject to appropriate approvals.

Measures to safeguard resource values outlined in 43 CFR 3100, 43 CFR 3600, and 43 CFR 3809 will apply to mineral development on the withdrawn lands.

Under the terms of the Military Lands Withdrawal Act of 1986, should the withdrawn lands be opened to mineral

location, mineral patents would convey title to locatable minerals only. These patents would also carry the right to use as much of the surface as is necessary for mining under the guidelines established by the Secretary of the Interior by regulation.

If coal leasing is considered during the life of this plan, the coal unsuitability criteria found in 43 CFR 3461 would be applied to determine areas available for coal leasing. No coal applications are likely during the life of this plan; there is no present interest in coal development. A plan amendment or revision would be developed if and when an application is received.

Subsistence

The federal government would follow the procedural requirements mandated by Section 810 of the Alaska National Interest Lands Conservation Act (ANILCA) where appropriate in the development of any additional discretionary plans or actions affecting all or portions of the military lands.

Preferred Alternative

The actions prescribed in the Preferred Alternative preserve the primary function of the withdrawal--military training--and allow economic development and continued recreational activities within certain environmental constraints. The military's need for large tracts of undisturbed lands, the healthy state of the withdrawal's current habitat, the rather modest prospects for economic development, and the desirability of emphasizing undeveloped recreational activities make such a diverse multiple use plan particularly attractive. The alternative also recognizes the critical safety questions, both for civilians and soldiers, inherent in utilizing areas in which troops train with live ammunition.

Management Actions

The following actions are consistent with achieving this goal.

Access

Preferred Action 1

The public may enter the post after gaining permission from the Army at Fort Wainwright. This pertains to all forms of access. They are expected to comply with all rules concerning restricted access and permanently and temporarily closed portions of the withdrawal.

Rationale: In order to accommodate recreational and development opportunities, it is important to have easy, but controlled, access to the withdrawal. All those entering the withdrawal need to be aware of dangers on the post and the military needs to be able to exclude people at times when training activities preclude public use.

Preferred Action 2

The public may use unimproved remote landing areas after complying with notification requirements and provided that this use does not interfere with military activities or incur liability to the federal government.

Rationale: Recreational users and miners utilize the Pine Creek airstrip. Continued use of it and any new landing fields can aid both recreationists and developers.

Preferred Action 3

Appropriate signs would be erected to warn the public and prevent public access into the impact area and onto the AFTAC site. Signs would warn those driving north on Skyline Road of

the potential closure of the buffer area around the impact area which encompasses much of that road.

Rationale: These steps are advisable for reasons of safety and security.

Preferred Action 4

Nonmilitary use of off-road vehicles (ORVs) is permitted in some portions of the withdrawal and under certain conditions. The Stuart Creek Impact Area and the AFTAC site are closed to ORV use as indicated in the management common to all alternatives, and use of the remainder of the lands is limited as follows:

ORVs of 1,500 pounds or more -- Vehicles of more than 1,500 pounds gross vehicle weight (GVW) may travel on Johnson, Skyline, Quarry, Manchu, and Transmitter roads and Brigadier Trail. Roads may be added or deleted from this list as necessary to protect the environment or enhance the military's mission. A permit is required to use vehicles of this size off of these routes. Generally permission to use these vehicles off these routes would only be granted when there is no danger of such use interfering with military operations, damaging the habitat, or detracting from the recreational value of the withdrawal.

ORVs of less than 1,500 pounds -- No permit would be required for nonmilitary use of ORVs less than 1,500 pounds GVW. General summer use of these ORVs would be limited to the roads listed above and to trails with low erosion potential. These ORVs may operate off these roads and trails during periods with snow cover adequate to prevent disturbance of the vegetative cover. The military may also exclude public use of ORVs in certain areas where their use would be detrimental to the military's mission.

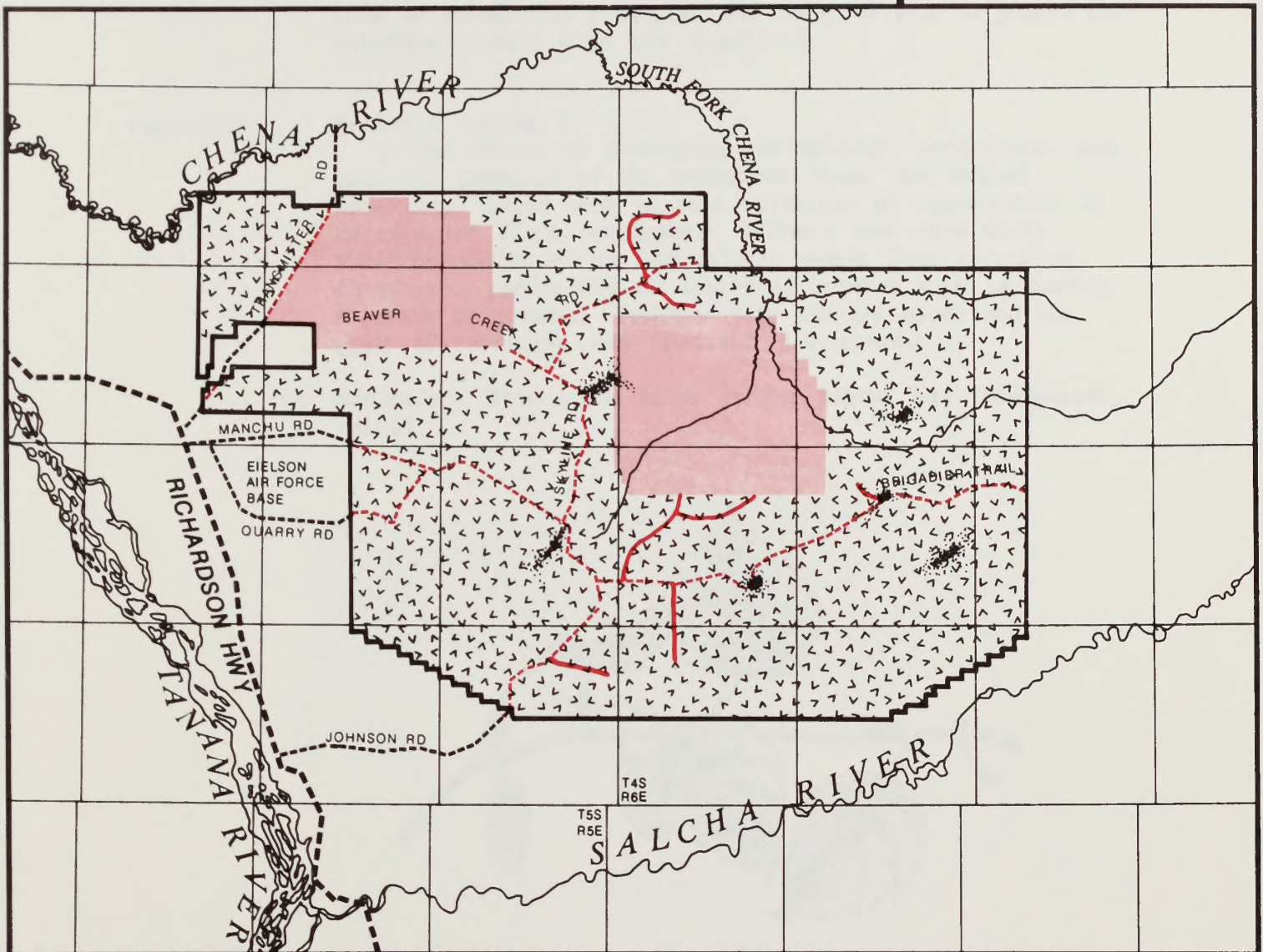
An accompanying ORV Use map indicates the roads on which all ORVs may operate, the trails on which ORVs of less than 1,500 pounds can travel, and the AFTAC site and impact area from which ORVs are generally excluded. Trails suitable for ORVs of less than 1,500 pounds may be added to or deleted from those displayed on the map. The authorized officer may permit additional summer use of ORVs on specific trails for specific purposes or under certain ground conditions. During the winter, ORVs generally can use all areas of the withdrawal, except the AFTAC site and the impact area.

Rationale: The impact area and the AFTAC site are closed to ORV use for safety and security reasons and in conjunction with access management direction provided by the management common to all alternatives. Larger ORVs are





Fort Wainwright

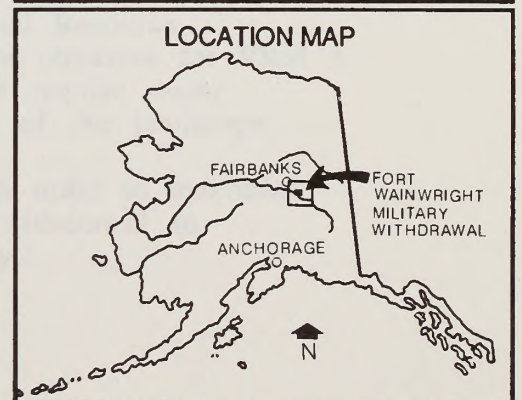
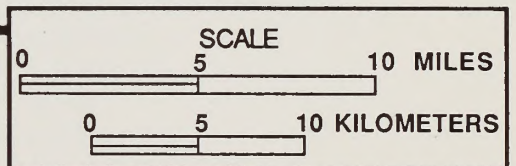
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Off Road Vehicle (ORV) Use



Legend

-  Roads and trails on which all ORVs may operate
-  Roads and trails on which nonmilitary ORVs less than 1500 lbs. may operate
-  Areas closed to nonmilitary ORV use at all times
-  Areas closed to nonmilitary ORV use during summer
During the winter ORVs generally can use these areas



restricted to specific roads and smaller ORVs are restricted to areas of certain soil conditions and times of year to protect the withdrawn land's soils and vegetation.

Vegetation

Preferred Action 5

In the course of developing the military, recreational, and economic potential of the withdrawn lands, the federal government would seek to take advantage of opportunities to improve the fort's vegetation. Military and nonmilitary activities outside of the impact area would limit vegetation disturbance, particularly to wild food sources such as berries, as much as possible consistent with military needs and the goals of recreation and economic development.

Rationale: This action helps protect habitat and recreational values.



Visual Resources

Preferred Action 6

The withdrawal is classified as Visual Resource Management (VRM) 4. The management objective for VRM 4 areas is to provide for activities which require major modifications of the existing character of the landscape.

Rationale: This action is appropriate in order to maximize the military's freedom to manage the withdrawal to accomplish its mission most effectively.

**Fish and
Wildlife Habitat****Preferred Action 7**

Develop and implement a Habitat Management Plan (HMP) to manage existing habitat. In consultation with the Alaska Department of Fish and Game, the HMP should establish target populations of game animals. The HMP should be coordinated with the Forest Management Plan outlined in Preferred Alternative 8. The plan would be consistent with the military's mission.

Rationale: Lack of definitive information on wildlife and their habitats on Fort Wainwright hinders sound resource management. The proposed HMP should develop an information base and use it for decision-making.

**Forestry****Preferred Action 8**

Develop a Forest Management Plan to determine the opportunity for the harvest of timber and fuel wood. Such a plan must remain within the constraints of the military mission; public safety and preservation of habitat and recreation are other values which should be considered. It may, for example, mandate the maintenance of uncut buffer strips along streams and lakes. (It is understood that forests in the withdrawal fall under BLM's restricted category for management; that is, management of the withdrawal is primarily for the military, but timber harvests are permitted. The Forest Management Plan should address allowable harvest levels, reforestation methods, and appropriate silvicultural methods by measuring the impact of each on military needs, recreational opportunities, and economic considerations.)

Rationale: The Fairbanks area has a demand for both timber and fuel wood, but the market and personal use potential for the forest resources of the YMA are not adequately understood. An FMP can establish the YMA's potential to meet

the demand and initiate harvests which would not restrict military activities or detract from other values of the withdrawn lands.

Cultural Resources

Preferred Action 9

Test archeological site XBD-095 and evaluate. If it is significant, excavate it. Elsewhere, inventory and mitigate, if necessary, cultural resources prior to anticipated ground-disturbing activities. Excavate and clear any significant resources found. Cultural resources would be managed for their information potential.

Rationale: Secs. 106 and 110 of the National Historic Preservation Act of 1966 mandate investigation and consideration of cultural resources before ground-disturbing activities. Under this alternative, inventory and mitigation would be driven by development and military needs, subject to the availability of funding. Site XBD-095 is singled out for work because the Army's historic preservation plan identified it as having middle to high potential to yield important archeological information. The researchers for the Army were uncertain whether it was eligible for the National Register of Historic Places. It is on the road system and near a quarry. It may well be affected by anticipated increased military training and public use on the YMA. Therefore, it should be examined.

Recreation

Preferred Action 10

Only the federal government and private developers authorized by the government may erect or maintain structures on the withdrawal. All unauthorized or "encroachment" cabins are subject to possession by the government following proper notice.

Rationale: Unauthorized structures trespass on federal lands withdrawn for military use. In some circumstances it may be preferable to move or destroy them for safety or security reasons.

Preferred Action 11

All those who enter the withdrawn lands must comply with the military's rules. These presently require:

- a. all those who enter to hunt, fish, or trap must sign a liability release form and attend a Hunting/Trapping/Fishing briefing prior to undertaking these activities each year.
- b. hunters and trappers must submit completed harvest reports to the appropriate Army office.

Rationale: The Army's rules are designed to ensure civilians' safety on Fort Wainwright and maintain an information base on recreational use. The briefing describes permanently and temporarily closed areas and other safety related information. The briefing also would address safe and environmentally proper use of ORVs on the withdrawal. Harvest reports would allow the federal government to better monitor hunter and trapper use and maintain accurate records of animal harvests on the fort. Such reports can assist in management of wildlife.

Preferred Action 12

Guides, outfitters, and air taxi services may operate on the withdrawal, provided they comply with other regulations concerning nonmilitary use of the land. Guides, outfitters, and air taxi services are responsible for ensuring that their clients comply with these rules. Guides and outfitters must obtain a permit to use federal lands and comply with other provisions of 43 CFR 8372.

Rationale: Access to the Pine Creek area is most easily achieved by flying to the nearby airstrip. Guides, outfitters, and air taxi services provide this access for those who do not have their own planes.

Rights-of-Way Preferred Action 13

Rights-of-way may be granted if they do not conflict with the military's mission. They should be subject to terms and conditions to assure that military needs are met.

Rationale: Rights-of-way can assist in development of the area, but they must not compromise the primary function of the withdrawal.

Minerals

Preferred Action 14

The Bureau of Land Management would develop or request the development of a mineral assessment for the withdrawn lands outside the impact area. This assessment would serve as a basis to determine the suitability of opening these lands to the operation of the mineral laws as contemplated in Sec. 12(a) of the Military Lands Withdrawal Act. The impact of mining on military activity would be a critical factor in determining whether to open the lands to mining; no such opening would be allowed without the concurrence of the Army. Until there is a determination to open the lands in accordance with Sec. 12(a), the withdrawn lands remain closed to the operation of the mineral laws. The three extant claims are an exception to this. These claimants retain their valid existing rights both to mine and to access their claims.

Rationale: There is little information on the mineral resources of Fort Wainwright or the development which may be necessary to extract the resource from the withdrawn lands. consequently, it is not known with adequate precision to what extent mining and its attendant activities may disrupt military uses of the fort. A mineral assessment would determine the availability of minerals on the withdrawn lands and allow a better understanding of the means to carry out mining without hindering the military's mission.

Preferred Action 15

Allow the sale or other disposal of mineral materials (sand and gravel). BLM would process applications for such disposals with the concurrence of the military to ensure minimal conflict with military activities.

Rationale: Mineral materials are necessary for economic developments, such as the Alaska Natural Gas Transportation System and the Trans-Alaska Gas System.

Fire Management

Preferred Action 16

The withdrawal would be divided into three fire management areas and a number of Critical fire suppression sites. Virtually all the area within the firebreak surrounding the Stuart Creek Impact Area would be in a Limited fire protection area. The exceptions would be those Air Force facilities in the impact area which now receive Critical protection under the Army's fire protection plan, and any future such facilities for which the Army or Air Force seek protection. These specific sites, as well as similar sites outside the firebreak, would receive Critical protection under this plan. The area east of the South Fork Chena River and north of Beaver Creek would be designated a Modified fire protection area. The immediate environs of improvements on the Pine Creek mining claims would be a Critical fire suppression site. The remainder of the YMA would have Full fire protection. (See the Fire Management Categories Map 1.) Future changes in suppression management can be effected through the Interagency Fire Management Plan with the concurrence of the military.

Rationale: Most of the area within the firebreak would receive Limited protection because of the dangers inherent in fighting a fire within an impact area. The firebreak would help prevent a fire within that area from expanding into the rest of the withdrawal. The specific installations within the impact area receiving Full protection merit this designation because of the expense of the equipment at these sites. The Modified and Full protection designations for the remainder of

the withdrawal coincide with protection designations in the Interagency Fire Management Plan for Alaska for lands adjacent to the YMA. They reflect protection needs for resources and the man-made environment bordering the withdrawal. By including the area between Beaver Creek and the South Fork Chena River in Full protection and designating the Critical suppression site, this alternative helps protect the property of the mining claim holders on Pine Creek.

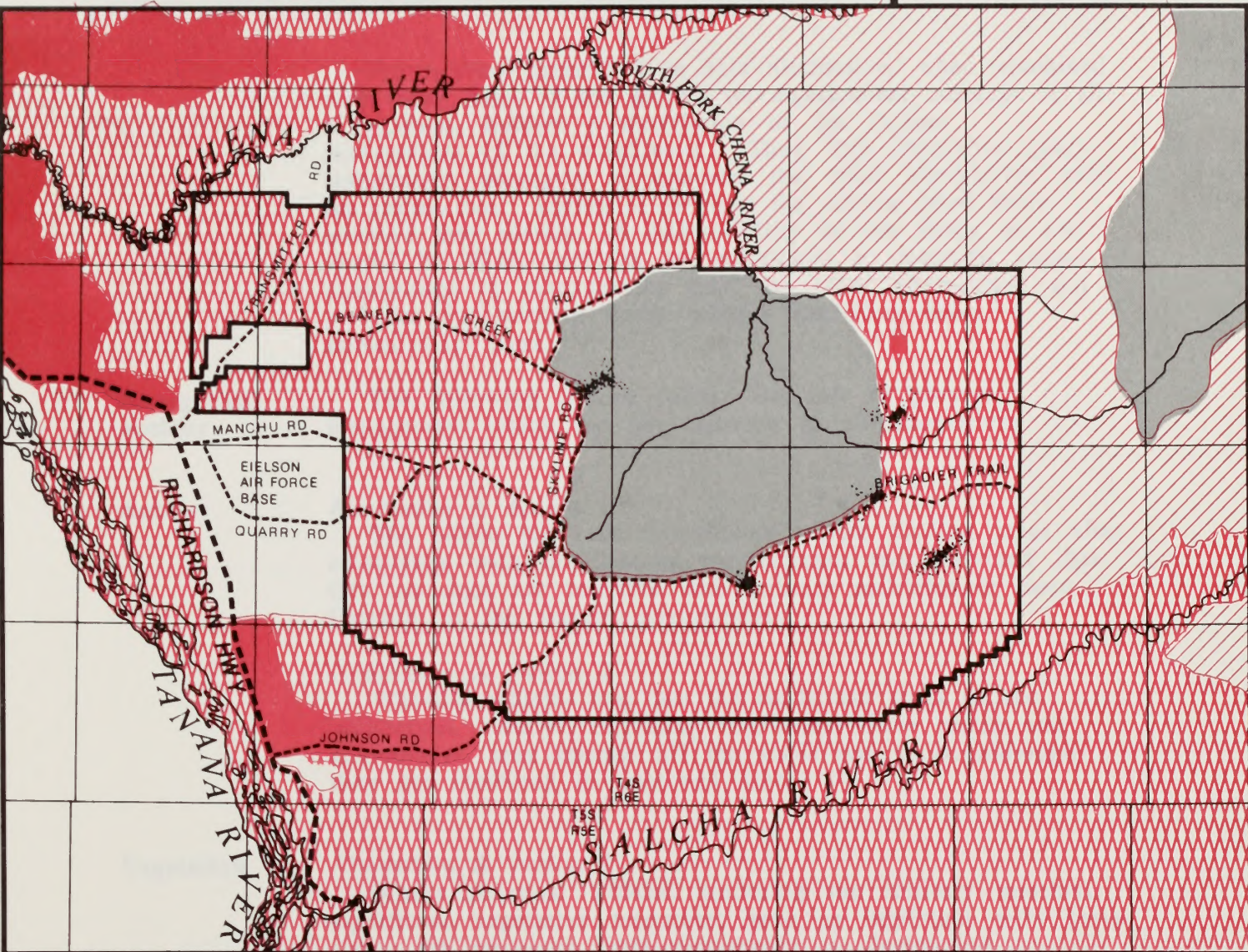


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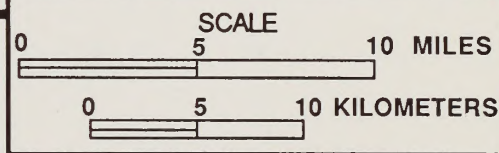
Fire Management Categories 1 of 2

Preferred Alternative
and Alternatives B and D



Legend

-  Critical Protection
-  Full Protection
-  Modified Action
-  Limited Action
-  Unplanned



Note: Some Air Force sites granted Critical protection are not shown for security reasons.

Alternative A

The actions prescribed in this alternative, when combined with those listed in the section on management common to all alternatives, renders a description of the current management of the withdrawal. Thus, this alternative gives information necessary to compare the other alternatives with the *status quo*. Opting to continue the actions listed below, whether they remain the responsibility of the Army or are shared by BLM, provides an opportunity to maintain greater consistency in management than the other alternatives and provides for military needs without excluding many nonmilitary uses.

Management Actions

The following actions reflect elements of present management which are not common to all alternatives.

Access

Alternative A Action 1

The public may use unimproved remote landing areas after complying with notification requirements and provided that this use does not interfere with military activities or incur liability to the federal government.

Alternative A Action 2

Wheeled vehicles may use the roads and trails on the withdrawal. ORVs, excluding four-wheel drive trucks and automobiles, may operate off the roads and trails, although they are restricted to approved areas.

Vegetation

Alternative A Action 3

Where practical without hindering the military mission, significant vegetative resources, such as important wild berry areas, are protected from disturbance or destruction.



**Fish and
Wildlife Habitat****Alternative A Action 4**

Fort Wainwright's Natural Resource Office encourages that all land clearing activities necessary for military actions, such as creation of landing zones, drop zones, and bivouac sites, be done to enhance moose browse and general habitat diversity.

Forestry**Alternative A Action 5**

Active duty and retired military personnel and current civilian employees at Fort Wainwright may obtain personal use firewood gathering permits from the post Natural Resources Office. They may only gather dead and down wood; no live trees may be cut unless approved by the Natural Resources Office.

**Cultural
Resources****Alternative A Action 6**

All inventory, evaluation, and mitigation is conducted as necessary; that is when areas have been or are about to be disturbed.

Recreation**Alternative A Action 7**

Only the federal government and private developers authorized by the government may erect or maintain structures on the withdrawal. All unauthorized or "encroachment" cabins are subject to possession by the government following proper notice.

Alternative A Action 8

All hunting, fishing, and trapping must be done in accordance with 6th Infantry Division (Light) Reg. 420-6. Its provisions include:

- a. hunters must sign in and out with the Army. Those engaged in trapping and fishing need not sign in or out.
- b. all those who enter the withdrawn lands to hunt, fish, or trap must sign a liability release form and attend a Hunting/Trapping/Fishing briefing within the calendar year.
- c. all people engaged in hunting or trapping must submit a completed harvest report to the Natural Resources Office.
- d. ORVs may be used for hunting, fishing, and trapping.
- e. Guides, outfitters, and air taxi services may operate on the withdrawal, provided they comply with other regulations concerning nonmilitary use of the land. They are responsible for ensuring that their clients comply with these rules.

Alternative A Action 9

The military attempts to minimize training and testing during September (moose and small game hunting seasons) and during critical periods for wildlife.

Rights-of-Way

Alternative A Action 10

Rights-of-way may be granted if they do not conflict with the military's mission. They should be subject to terms and conditions to assure that military needs are met.

Minerals

Alternative A Action 11

The withdrawal remains closed to all mining except for mineral materials.

Alternative A Action 12

The sale or other disposal of mineral materials (sand and gravel) is allowed. BLM processes any application for such disposals with the concurrence of the Army to ensure minimal conflict with military activities.

Fire Management Alternative A Action 13

The Stuart Creek Impact Area, except for specific Air Force sites, receive Limited fire suppression. These Air Force facilities receive Critical suppression. (The location of these sites is withheld for security reasons.) A strip a mile wide around the boundary of the withdrawal receives Full suppression, while the remainder of the YMA is under Modified fire suppression.

Alternative B

The actions prescribed in this alternative are designed to ensure that the military has the greatest flexibility to meet increasing training needs on the YMA over the life of the withdrawal. Fort Wainwright is slated to receive substantial increases in military personnel over the next few years in conjunction with the deployment of the Light Infantry Division. These troops would utilize training areas at a level at least double the current use. In addition, changing emphases in Air Force training requirements may increase Air Force use of the Stuart Creek Impact Area.

Management Actions The following actions are consistent with achieving this goal.

Access

Alternative B Action 1

Provide varied training area terrain and conditions and uninhibited use of the withdrawal by the military by excluding all recreational, economic development, and other nonmilitary access to the YMA. (This does not exclude the deployment of fire fighting personnel requested by the military. Nor does it exclude forest products harvesters or archeologists acting in accordance with Alternative B Actions 5 and 6, respectively.)

Alternative B Action 2

Place locked gates at all road entrances to the YMA. Keys to these gates would be maintained by the military. Passage through the gates would only be allowed for the furtherance of the military's mission.

Visual Resources Alternative B Action 3

The withdrawal is classified as VRM 4. The management objective for VRM 4 areas is to provide for activities which require major modifications of the existing character of the landscape.

Fish and Wildlife Habitat

Alternative B Action 4

Develop a Habitat Management Plan designed to conserve wildlife values and minimize conflicts between wildlife and military activities without restricting necessary military training and testing. The HMP should establish target populations consistent with these goals in consultation with the Alaska Department of Fish & Game.

Forestry**Alternative B Action 5**

Allow timber and firewood harvests only in cases in which they assist military activities. (It is understood that forests in the withdrawal fall under the "enhancement of other uses" category as outlined in BLM's Manual 1622.21A(1); that is, forest management is specifically for the benefit of military use.) Any forest management plan would mandate silvicultural practices and reforestation methods, if any are to be conducted, which meet military needs and provide protection to wildlife habitat.

**Cultural
Resources****Alternative B Action 6**

Conduct a full inventory and mitigation of cultural resource sites on the YMA, regardless of whether there are any immediately anticipated ground-disturbing activities. Management would be for information potential.

Minerals**Alternative B Action 7**

Buy out the three mining claims on Pine Creek. Until such claims are purchased, miners can access their claims over the YMA only after obtaining written authorization from the post commander. The commander would grant such authorization, unless such access would undermine military activities. The withdrawal would remain closed to other locatable and leasable mining.

Alternative B Action 8

The withdrawal would remain open to mineral material (sand and gravel) extraction in connection with public highways as provided for by Public Law 85-767. Extraction sites would be reviewed by BLM and the Army to ensure minimal conflict with military activities.

Fire Management Alternative B Action 9

The withdrawal would be divided into three fire management areas and a number of Critical suppression sites. Virtually all the area within the firebreak surrounding the Stuart Creek Impact Area would be in a Limited fire protection area. The exceptions would be those Air Force facilities in the impact area which now receive Critical protection under the Army's fire protection plan, and any future such installations for which the Army or Air Force seek protection. These specific sites, as well as similar sites outside the firebreak, would receive Critical protection under this plan. The area east of the South Fork Chena River and north of Beaver Creek would be designated a Modified fire protection area. The immediate environs of improvements on the Pine Creek mining claims would be a Critical fire suppression site. The remainder of the YMA would have Full fire protection. (See the Fire Management Categories Map 1 in the discussion of the Preferred Alternative.)

Alternative C

The actions prescribed for this alternative are designed to enhance current recreational use of the Yukon Maneuver Area (YMA) and to offer new opportunities for the public to enjoy this tract of land. Current common uses include hunting, fishing, trapping, sight-seeing, and berry-picking. Activities which are now conducted little if at all on the post, but which this alternative seeks to encourage, include camping, hiking, cross-country skiing, and recreational gold-panning.

Management Actions

The following actions are consistent with achieving these goals.

Access

Alternative C Action 1

The public may enter the withdrawal at any time without expressed approval by the military. (This does not remove the public's responsibility to check into Eielson Air Force Base, should they enter via that installation.)

Alternative C Action 2

The public may use unimproved remote landing areas after complying with notification requirements and provided that this use does not interfere with military activities or incur liability to the federal government.

Alternative C Action 3

Maintain signs at road entrances to the withdrawal informing the public that they are entering a military withdrawal. The signs should warn of dangerous areas and closed areas.

Alternative C Action 4

Gates and appropriate signs would be erected to warn and prevent public access into the impact area and onto the AFTAC site. These gates would only be opened for military use. Gates would prevent public access onto the AFTAC site at both the east and west junctures of Beaver Creek Road with the site's boundary. Signs at the gates would warn of the need to stay out of these areas. Signs would also warn those driving north on Skyline Road of the potential closure of the buffer area which encompasses much of that road. A gate would be erected at the juncture of Skyline Road with the buffer area. The gate would be closed when firing in nearby areas of the impact area require such closure for safety reasons.

Alternative C Action 5

Nonmilitary use of off-road vehicles is permitted in some portions of the withdrawal and under certain conditions. The Stuart Creek Impact Area and the AFTAC site are closed to ORV use as indicated in the management common to all alternatives, and use of the remainder of the lands is limited as follows:

ORVs of 1,500 pounds or more -- Vehicles of more than 1,500 pounds gross vehicle weight (GVW) may travel on Johnson, Skyline, Quarry, Manchu, and Transmitter roads and Brigadier Trail. A permit is required to use vehicles of this size off of these routes. Generally permission to use these vehicles off these routes would only be granted when there is no danger of such use interfering with military operations, damaging the habitat, or detracting from the recreational value of the withdrawal.

ORVs of less than 1,500 pounds -- No permit would be required for nonmilitary use of ORVs less than 1,500 pounds GVW. General summer use of these ORVs would be limited to the roads listed above and to trails with low erosion potential. These ORVs may operate off these roads and trails during periods with snow cover adequate to prevent disturbance of the vegetative cover. The military may also exclude public use of ORVs in certain areas where their use would be detrimental to the military's mission.

The ORV Use map in the discussion of the Preferred Alternative indicates the roads on which all ORVs may operate, the trails on which ORVs of less than 1,500 pounds can travel, and the AFTAC site and impact area from which ORVs are generally excluded. Trails suitable for ORVs of less than 1,500 pounds may be added to or deleted from those displayed on the map. The authorized officer may permit additional summer use of ORVs on specific trails for specific purposes or under certain ground conditions. During the winter, ORVs generally can use all areas of the withdrawal, except the AFTAC site and the impact area.

Visual Resources

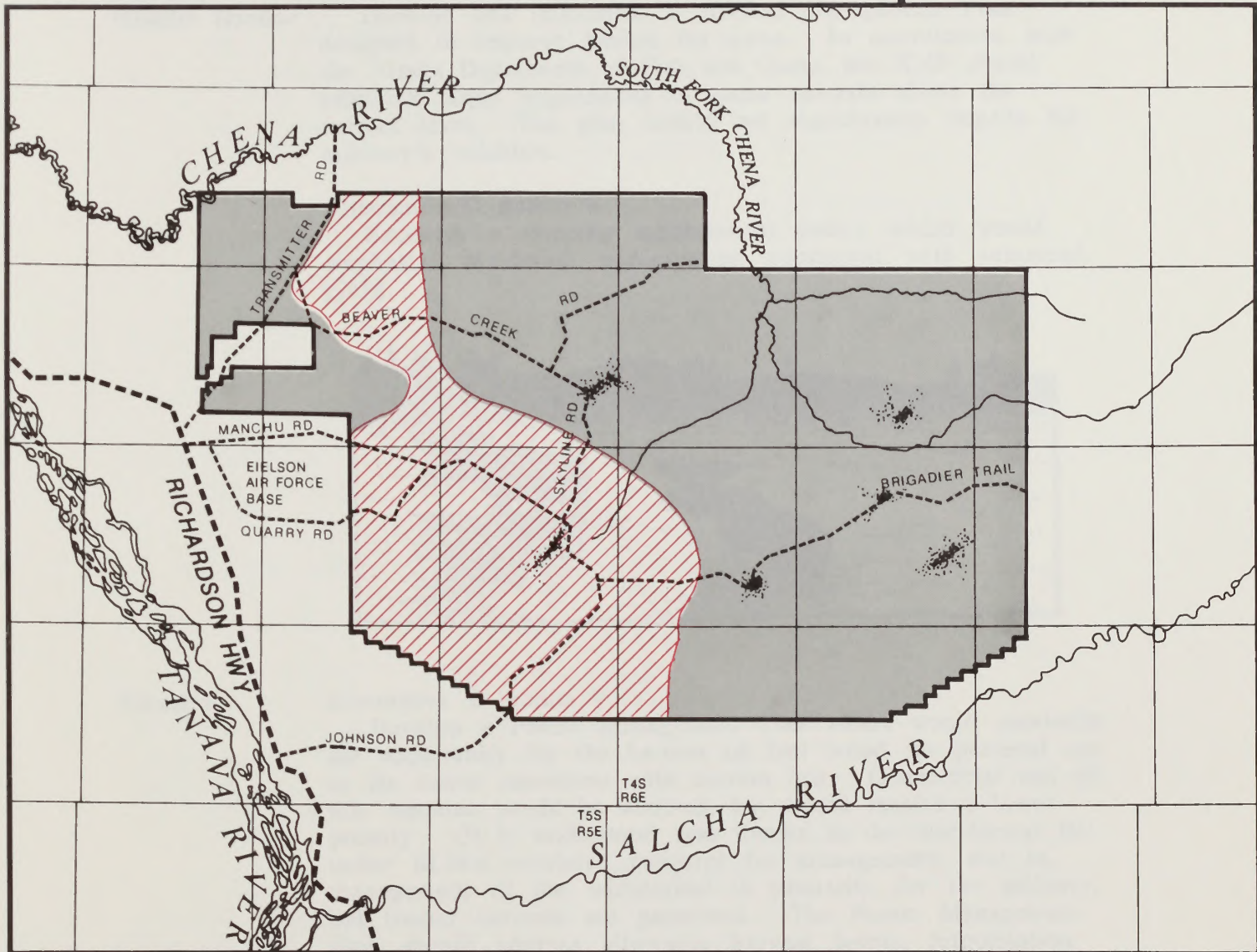
Alternative C Action 6

Manage visual resources according to prescriptions for Visual Resource Management classes 3 and 4 as depicted on the Visual Resource Classification map. The management objective in VRM 3 areas is to design proposed alterations so as to partially retain the existing character of the landscape. The management objective for VRM 4 areas is to provide for activities which require major modifications of the existing character of the landscape.

Fort Wainwright

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Visual Resource
Management
Alternatives C and D



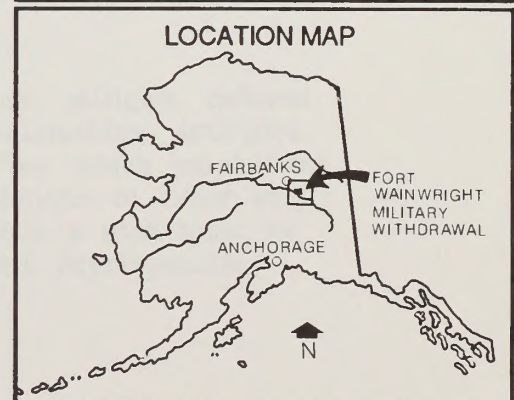
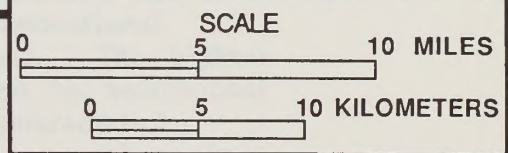
Legend



Visual Resource Management Class III
allows moderate modification of characteristic landscape that
does not attract attention nor dominate view.



Visual Resource Management Class IV
allows major modification of characteristic landscape that
may dominate the view and be a major focus of attention.



**Fish and
Wildlife Habitat**

Alternative C Action 7

Develop and implement a Habitat Management Plan designed to improve habitat for game. In consultation with the Alaska Department of Fish and Game, the HMP should establish target populations of game animals above the current level. The plan should not significantly impede the military's mission.

Alternative C Action 8

Establish a trapping management policy which would emphasize maximum participation consistent with sustained yield.



Forestry

Alternative C Action 9

Develop a Forest Management Plan which would maximize the opportunity for the harvest of fuel wood for personal use to the extent consistent with current law. Commercial use of this resource would be allowed, but would receive a lower priority. (It is understood that forests in the withdrawal fall under BLM's restricted category for management; that is, management of the withdrawal is primarily for the military, but timber harvests are permitted. The Forest Management Plan should address allowable harvest levels, reforestation methods, and appropriate silvicultural methods by measuring the impact of each on military needs, recreational opportunities, and economic considerations. The highest priority would be military need, followed by recreational opportunities, and then economic considerations.)

**Cultural
Resources**

Alternative C Action 10

Inventory, evaluate, and, if necessary, mitigate cultural resources prior to anticipated ground-disturbing activities. Develop a Cultural Resource Activity Plan which emphasizes avoiding excavation as a mitigation technique in order to conserve cultural resources in place. Such a plan must be consistent with the military mission and developments approved by the plan.

Recreation**Alternative C Action 11**

Only the federal government and private developers authorized by the government may erect or maintain structures on the withdrawal. All unauthorized or "encroachment" cabins are subject to possession by the government following proper notice.

Alternative C Action 12

All Army training activities would cease during moose-hunting season.

Alternative C Action 13

All Air Force training activities would cease during moose-hunting season.

Alternative C Action 14

Limit military training to weekdays to the maximum extent possible.

Alternative C Action 15

Post road signs and mileage markers on roads and trails in the withdrawal.

Alternative C Action 16

Erect about ten informational signs to benefit recreational use. These signs would be along the major roads on the withdrawal and would instruct viewers on attractions such as some of the good views the area provides of the Alaska Range and nearby tors and areas having other values, such as prime berry-picking grounds and any important cultural sites which future mitigation work may discover.

Alternative C Action 17

The Army and BLM would develop and implement a public information program, including newspaper and other media, informing the public of recreational opportunities on the YMA and the public's responsibilities when using the area.

Alternative C Action 18

Develop a Recreation Activity Management Plan which might include campgrounds, trails, cabins, and other facilities. This should include examination of potential joint use with the military of facilities such as shelters, trails, bivouac areas, and landing fields.

Rights-of-Way**Alternative C Action 19**

Rights-of-way may be granted if they do not conflict with the military's mission. They should be subject to terms and conditions to assure that military needs are met. Permit all roads and trails constructed in the interest of timber or

mineral development to be open for recreational use, to the maximum extent consistent with the military mission.

Alternative C Action 20
Improve Brigadier Trail.

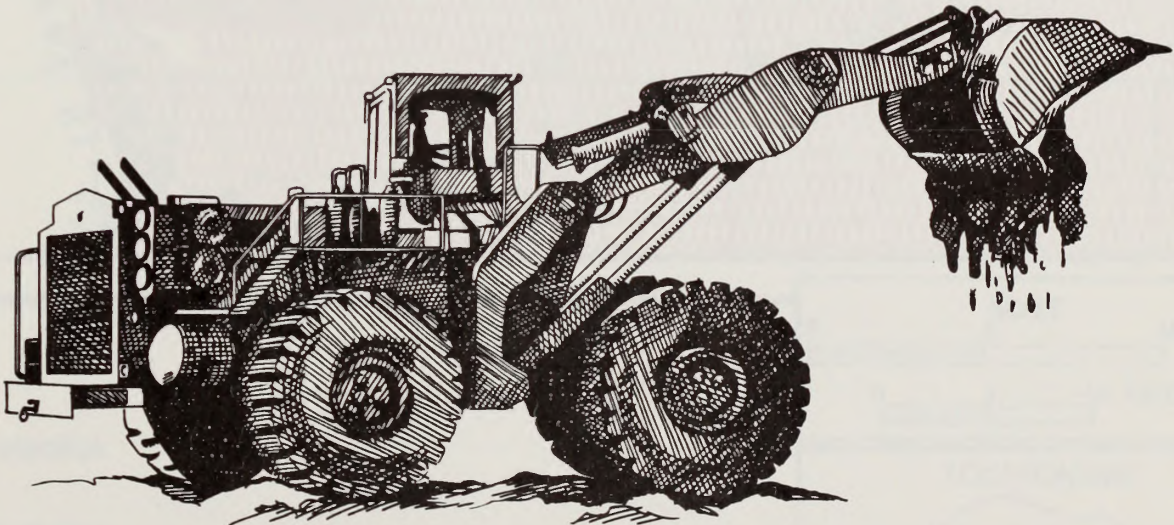
Minerals

Alternative C Action 21

The withdrawn lands would remain closed to the operation of the mining laws, except for mineral materials. Miners with valid claims on Pine Creek can access their claims over the YMA only after obtaining written authorization from the post commander. The commander would grant this authorization, unless access would undermine military activities.

Alternative C Action 22

Allow the sale or other disposal of mineral materials (sand and gravel). BLM and the Army would review any application for such disposals to ensure minimal conflict with military activities and recreational values.



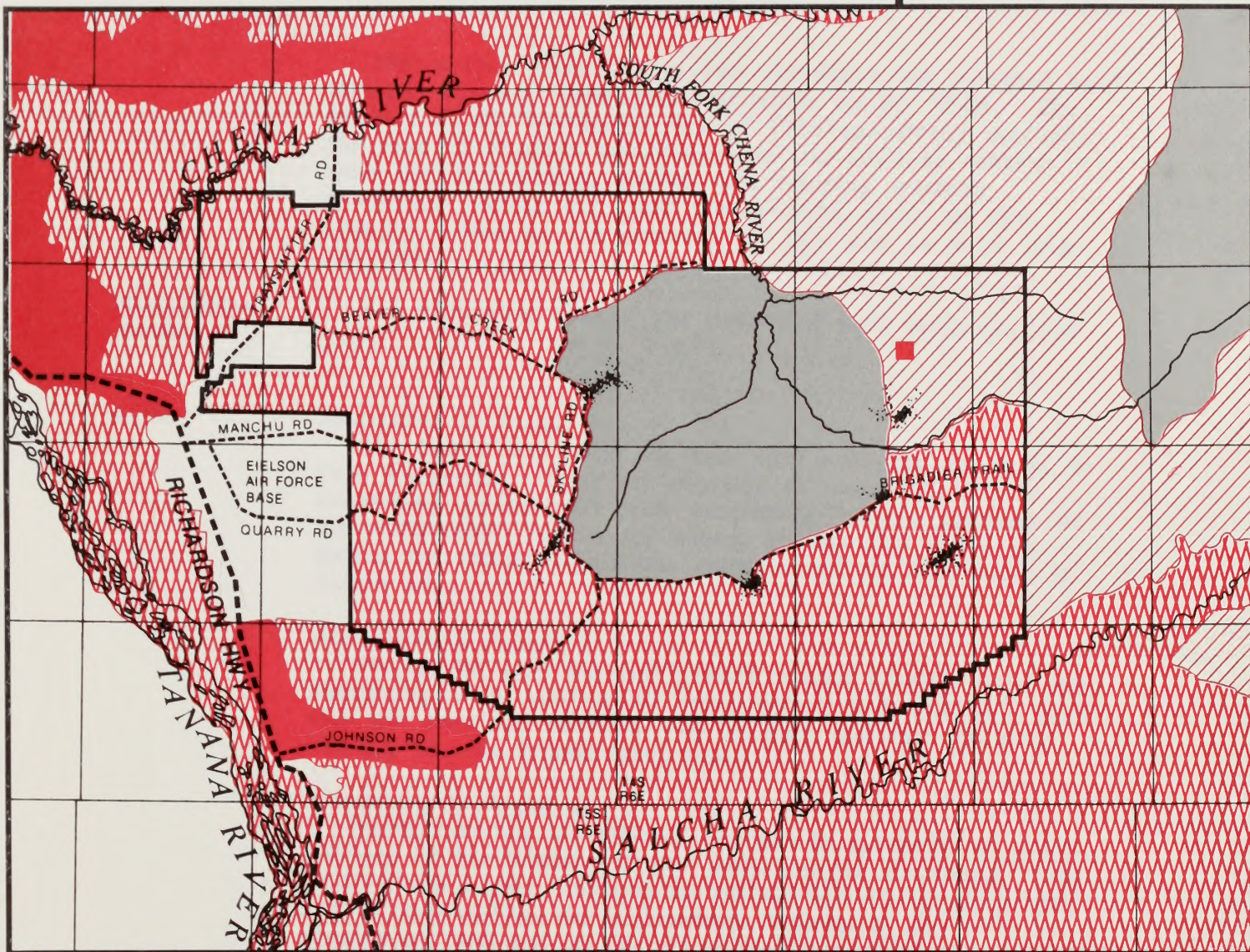
Fire Management Alternative C Action 23

The withdrawal would be divided into three fire management areas and a number of Critical fire suppression sites. Virtually all the area within the firebreak surrounding the Stuart Creek Impact Area would be in a Limited fire protection area. The exceptions would be those Air Force facilities in the impact area which now receive Critical protection under the Army's fire protection plan, and any future such facilities for which the Army or Air Force seek protection. These specific sites, as well as similar sites outside the firebreak, would receive Critical protection under this plan. The area east of the firebreak and on the right bank of the South Fork Chena River would be designated a Modified fire protection area. (The area on the right bank of the South Fork but within the firebreak would be designated Limited.) The immediate environs of improvements on the Pine Creek mining claims would be a Critical fire suppression site. The remainder of the YMA would have Full fire protection. (See the Fire Management Categories Map 2.)

Fort Wainwright

DRAFT Resource Management Plan
DRAFT Environmental Impact Statement

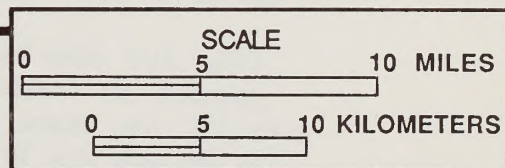
Fire Management
Categories 2 of 2
Alternative C



Legend

-  Critical Protection
-  Full Protection
-  Modified Action
-  Limited Action
-  Unplanned

Note: Some Air Force sites granted Critical protection are not shown for security reasons.



Alternative D

The actions prescribed in this alternative are designed to increase economic development activities on the YMA. The Military Lands Withdrawal Act of 1986 specifically mentions the need to examine management of the lands to enhance such use and mining, timber, and trapping interests commented during the issue identification phase of this planning action on the potential for this area to serve such purposes.

Management Actions

The following actions are consistent with achieving this goal.

Access

Alternative D Action 1

The public may enter the post after notifying the Army at Fort Wainwright. They are expected to respect all rules concerning permanently and temporarily closed portions of the withdrawal. Access for mining activity also would be guided by special regulations contemplated in Alternative D Action 16.

Alternative D Action 2

The public may use unimproved remote landing areas after complying with notification requirements and provided that this use does not interfere with military activities or incur liability to the federal government.

Alternative D Action 3

Nonmilitary use of off-road vehicles is permitted in some portions of the withdrawal and under certain conditions. The Stuart Creek Impact Area and the AFTAC site are closed to ORV use as indicated in the management common to all alternatives, and use of the remainder of the lands is limited as follows:

ORVs of 1,500 pounds or more -- Vehicles of more than 1,500 pounds gross vehicle weight (GVW) may travel on Johnson, Skyline, Quarry, Manchu, and Transmitter roads and Brigadier Trail. A permit is required to use vehicles of this size off of these routes. Generally permission to use these vehicles off these routes would only be granted when there is no danger of such use interfering with military operations, damaging the habitat, or detracting from the recreational value of the withdrawal.

ORVs of less than 1,500 pounds -- No permit would be required for nonmilitary use of ORVs less than 1,500 pounds GVW. General summer use of these ORVs would be limited to the roads listed above and to trails with low erosion potential.

These ORVs may operate off these roads and trails during periods with snow cover adequate to prevent disturbance of the vegetative cover. The military may also exclude public use of ORVs in certain areas where their use would be detrimental to the military's mission.

The ORV Use map in the discussion of the Preferred Alternative indicates the roads on which all ORVs may operate, the trails on which ORVs of less than 1,500 pounds can travel, and the AFTAC site and impact area from which ORVs are generally excluded. Trails suitable for ORVs of less than 1,500 pounds may be added to or deleted from those displayed on the map. The authorized officer may permit additional summer use of ORVs on specific trails for specific purposes or under certain ground conditions. During the winter, ORVs generally can use all areas of the withdrawal, except the AFTAC site and the impact area.

Alternative D Action 4

Restrict public use of roads on the withdrawal associated with economic development during periods of intense development activity.

Alternative D Action 5

Exclude military activities from operation control facilities for economic development. These sites would encompass the minimum necessary area to store equipment and materials and to house the operators.

Visual Resources

Alternative D Action 6

Manage visual resources according to prescriptions for Visual Resource Management classes 3 and 4 as depicted on a map in the discussion of Alternative C. The management objective in VRM 3 areas is to design proposed alterations so as to partially retain the existing character of the landscape. The management objective for VRM 4 areas is to provide for activities which require major modifications of the existing character of the landscape.

Fish and Wildlife Habitat

Alternative D Action 7

Develop a Habitat Management Plan which would accommodate and minimize conflicts with economic development activities and be consistent with the trapping management plan noted in Alternative D Action 8. The HMP should establish target populations consistent with these goals in consultation with the Alaska Department of Fish & Game. The plan should not significantly impede the military's mission.

Alternative D Action 8

Establish a permitting system for trapping through a trapping management plan. This system may include a bidding system to allot trapping rights on the YMA, and it would be designed to promote a sustained harvest of furbearers and commercial, rather than recreational, trapping. The plan should be developed in cooperation with the Alaska Department of Fish and Game.

Forestry

Alternative D Action 9

Develop a Forest Management Plan designed to offer forest product sales on a competitive basis. The plan would focus on harvesting timber nearest existing roads and on areas the military plans to develop. It would give priority to economic development of timber, but the plan would not preclude personal use of the resource.

**Cultural
Resources**

Alternative D Action 10

Test archeological site XBD-095 and evaluate. If it is significant, excavate it. Elsewhere, inventory and mitigate, if necessary, cultural resources only prior to anticipated ground-disturbing activities. Excavate and clear any significant resources found. Cultural resources would be managed for their information potential.

Recreation

Alternative D Action 11

Only the federal government and private developers authorized by the government may erect or maintain structures on the withdrawal. All unauthorized or "encroachment" cabins are subject to possession by the government following proper notice.

Alternative D Action 12

The military attempts to minimize training and testing during September (moose and small game hunting seasons).

Rights-of-Way

Alternative D Action 13

To the maximum extent consistent with achieving military objectives, grant rights-of-ways to facilitate economic development on and off the withdrawal. However, such rights-of-way are not to include access roads and other ancillary mining facilities as defined in 43 CFR 3809. They must be incorporated in a mining plan of operation.

Alternative D Action 14

Improve Brigadier Trail.

Minerals**Alternative D Action 15**

Open the lands to mineral location under regulations and procedures which would ensure that necessary military activities can be accomplished despite exploration and mining.

Alternative D Action 16

Open the land to mineral leasing under procedures which would ensure that necessary military activities can be accomplished.

Alternative D Action 17

Allow the sale or other disposal of mineral materials (sand and gravel). BLM would process applications for such disposals with the concurrence of the Army to ensure minimal conflict with military activities.

Fire Management Alternative D Action 18

The withdrawal would be divided into three fire management areas and a number of Critical fire suppression sites. Virtually all the area within the firebreak surrounding the Stuart Creek Impact Area would be in a Limited fire protection area. The exceptions would be those Air Force facilities in the impact area which now receive Critical protection under the Army's fire protection plan, and any future such facilities for which the Army or Air Force seek protection. These specific sites, as well as similar sites outside the firebreak, would receive Critical protection under this plan. The area east of the South Fork Chena River and north of Beaver Creek would be designated a Modified fire protection area. The immediate environs of improvements on the Pine Creek mining claims would be a Critical fire suppression site. The remainder of the YMA would have Full fire protection. (See the Fire Management Categories Map 1 in the discussion of the Preferred Alternative.)

The following table summarizes the actions prescribed by the alternatives. The display is designed to facilitate comparisons of the actions concerning various facets of resource management among the alternatives. A blank space in the matrix indicates that, other than the management designated in the management common to all alternatives, the corresponding alternative does not mandate protection, development, or other initiative similar to that described in other alternatives.

Summary of Alternatives

Preferred Alternative	Alternative A	Alternative B	Alternative C	Alternative D
Access				
1. public may enter with permission from Army	1. same as Preferred Alternative	1. no nonmilitary access	1. no restrictions on access	1. same as Preferred Alternative
2. remote landing areas available after notifying Army	1. same as Preferred Alternative		2. same as Preferred Alternative	2. same as Preferred Alternative
3. signs at roads to impact area and AFTAC site		2. locked gates at all entrances to withdrawal	3. warning signs at entrances to withdrawal 4. signs and gates at roads to impact area and AFTAC site	
4. no ORVs in impact area, AFTAC site, or other military training facilities; no permit needed to use ORVs less than 1,500 lbs. but must remain on certain roads and trails; need permit to use larger ORVs off roads	2. wheeled vehicles may use roads and trails; ORVs allowed off roads		5. same as Preferred Alternative	3. same as Preferred Alternative
				4. restrict public use of economic development roads 5. no military activities at economic development control facilities

Note: Additional management direction for each alternative is contained in Management Common to All Alternatives.

Summary of Alternatives

	Preferred Alternative	Alternative A	Alternative B	Alternative C	Alternative D
Vegetation	5. improve and protect vegetation resources in course of conducting other actions	3. protect significant vegetation resources from military actions			
Visual Resources	6. all VRM 4	3. all VRM 4	6. west half of area, except flats at extreme west VRM 3; all other VRM 4	6. same as Alternative C	
Fish and Wildlife	7. HMP to manage habitat	4. encourage military clearing be done so as to enhance habitat	4. HMP to conserve wildlife without interfering with military	7. HMP to improve hunting	7. HMP to accommodate economic development and trapping permit system
Forestry	8. FMP to study opportunities for fuel wood and timber harvesting	5. military personnel and civilian employees can take firewood	5. harvest only to aid military activities	8. emphasize maximum participation in trapping	8. establish trapping permit system to promote commercial trapping and sustained yield
				9. FMP to emphasize personal use firewood harvesting	9. FMP to emphasize commercial harvesting
Note: Additional management direction for each alternative is contained in Management Common to All Alternatives.					

Summary of Alternatives

	Preferred Alternative	Alternative A	Alternative B	Alternative C	Alternative D
Cultural Resources	9. test and evaluate site XBD-095; inventory, evaluate, and mitigate as necessary	6. inventory, evaluate, and mitigate as necessary	6. inventory, evaluate, and mitigate all areas	10. same as Alternative A	10. same as Preferred Alternative
Recreation	10. no unauthorized cabins	7. same as Preferred Alternative		11. same as Preferred Alternative	11. same as Preferred Alternative
	11. recreationists must follow military rules; these now require those who hunt, fish, or trap to sign a liability release form and attend a briefing and hunters and trappers must submit harvest reports	8. hunt, fish, and trap according to Reg. 420-6			
	12. guides, etc. may operate with permit				
		9. military minimizes its use during September		12. Army training stops during moose season	12. same as Alternative A
				13. Air Force training stops during moose season	
				14. limit training to weekdays when possible	

Note: Additional management direction for each alternative is contained in Management Common to All Alternatives.

Summary of Alternatives

Preferred Alternative	Alternative A	Alternative B	Alternative C	Alternative D
Recreation (cont.)			15. post road and mileage signs 16. post recreational information signs 17. establish a public information program 18. RAMP for camp-grounds, trails, shelters, and other facilities	
Rights-of-Way	13. rights-of-way may be granted if they do not conflict with military needs	10. same as Preferred Alternative	19. same as Preferred Alternative	13. grant rights-of-way for economic developments other than mining
Minerals	14. mineral assessment prior to consideration of opening under Sec. 12(a) of P.L. 99-606	11. closed to mining, except for mineral materials	20. improve Brigadier Trail	15. open to mineral location with regulations 16. open to mineral leasing with regulations
	15. consider military activities in allowing mineral material sale and road work sites	8. consider military activities in allowing mineral material sites for road work	22. consider military and recreation activities in allowing mineral material sale and road work sites	17. same as Preferred Alternative

Note: Additional management direction for each alternative is contained in Management Common to All Alternatives.

Summary of Alternatives

Preferred Alternative	Alternative A	Alternative B	Alternative C	Alternative D
Fire Management				
16. limited suppression for Stuart Cr. Impact Area; Critical for Air Force facilities and mining improvements; Modified east of S. Fork Chena R. and north of Beaver Cr.; Full for remainder; change through Interagency Fire Mgmt. Plan	13. Limited for Stuart Cr. Impact Area; except Critical for Air Force facilities; Full for strip around YMA perimeter; rest Modified	9. Limited for Stuart Cr. Impact Area; Critical for Air Force facilities and mining improvements; Modified east of S. Fork Chena R. and north of Beaver Cr.; Full for remainder	23. Limited for Stuart Cr. Impact Area; Critical for Air Force facilities and mining improvements; Modified east and north of S. Fork Chena R.; Full for remainder	18. same as Alternative B

Note: Additional management direction for each alternative is contained in Management Common to All Alternatives.

The following table provides estimations of the level of activity for recreational use and mining under the various alternatives. Discussion of the development potential of the Yukon Maneuver Area can be found at the beginning of Chapter 3.

Activity Projections 1990-2001 for Each Planning Alternative

	Preferred Alternative	Alternative A	Alternative B	Alternative C	Alternative D
Recreation					
Visitor days	9,000	9,000	0	10,000	9,000
Locatable Minerals					
Extant/new placer operations	1/0 - 1	1/0	0	1/0	1/0 - 1
Acres impacted*	0 - 8/yr.	0 - 4/yr.	0	0 - 4/yr.	0 - 8/yr.
Mineral Material Sales					
Gas line sites**	1	1	0	1	1
DOT/PF sites	2	2	2	2	2
Acres impacted	15 - 30	15 - 30	10 - 20	15 - 30	15 - 30

*Does not include acreage for roads and structures.

**Assumes TAGS or ANGTS is built, but not both.

The following table summarizes the anticipated impacts of the alternatives. Chapter 3 elaborates on the information presented in this table.

Summary of Environmental and Military Consequences

	Preferred Alternative	Alternative A	Alternative B	Alternative C	Alternative D
Cultural Resources	Timber harvests, mining, and military activities could impact sites; XBD-095 information will be preserved	Military activities and sand and gravel extraction can disturb sites	Military activities and road use sand and gravel sites can disturb sites; there will be less potential for intentional and unintentional disturbance of cultural sites by civilians; far more cultural sites will be inventoried and evaluated under this alternative compared to all other alternatives	Small timber harvests, military activities, and sand and gravel extraction can disturb cultural sites; a small increase in visitor days and improvement of Brigadier Trail could increase intentional and unintentional disturbance of cultural sites	Timber harvests, mining, and military activities could impact sites; encouraging roads and improving Brigadier Trail will tend to increase potential for intentional and unintentional disturbance of cultural sites; XBD-095 information will be preserved
Socio-economics	Preserves current economic benefits of recreation; may add new source of timber and firewood for both personal and commercial harvest; provides for most convenient sand and gravel supplies for private developments; retains extant Pine Creek mining claims and may result in locatable mining opening	Preserves current economic benefits of recreation, personal firewood gathering, sales of sand and gravel, and extant mining claims	Economic benefits of recreation will shift to other areas of Alaska and some recreation may not take place; eliminates benefit of personal firewood gathering and would force private developers to haul sand and gravel greater distances; purchasing extant mining claims will eliminate their potential economic stimulus	Modest increase over current economic benefits of recreation; offers more forest products as in Preferred Alternative, but with greater emphasis on personal use; provides for most convenient sand and gravel supplies for private developments; retains extant Pine Creek mining claims	Impacts of recreation and mining will be the same as for the Preferred Alternative; FMP will differ from Preferred Alternative's by emphasizing commercial harvests

Summary of Environmental and Military Consequences

	Preferred Alternative	Alternative A	Alternative B	Alternative C	Alternative D
Air, Soil, Water, and Vegetation	Greater protection from ORVs than current mgmt.; potential increases in erosion, sedimentation and traffic-induced dust along roadways from timber harvests and mining	Small impacts from ORVs; little if any impact from fuel wood gathering; no effects from mining; slightly less aggressive fire suppression effort may increase acres burned and smoke discharged into atmosphere	Restriction on public access minimizes nonmilitary impacts; less effects from sand and gravel extraction than other alternatives because no sales are allowed	ORV impacts will be the same as in the Preferred Alternative and there will be little if any impact from fuel wood gathering	More impacts due to ground clearing and road construction for development; increased potential for erosion and sedimentation under more aggressive timber harvesting program; ORV and mining impacts same as in Preferred Alternative
Fish and Wildlife	HMP, FMP, and efforts to improve vegetation in course of developing military, economic, and recreational values will tend to increase open habitat, while moderately more aggressive fire suppression plan will favor succession to climax forest; restrictions on ORV use may decrease large game harvest, but hunting by miners could cause small increase in game harvest	Current healthy animal populations would be maintained, despite growth in military population; fewer non-military impacts on wildlife than all but Alternative B because there is no mining, timber sales, or recreational improvements	Exclusion of hunters and trappers will cause a temporary increase in game and furbearers not at carrying capacity; ultimately natural forces will eliminate excess and maintain natural equilibrium	Personal use fuel wood gathering will create little new open habitat, but HMP could mandate actions which by providing more browse could substantially enhance moose population; modest increase in visitor days will increase pressure on wildlife and, barring adoption of countermeasures as part of the HMP, there could be a decrease in the populations of sensitive species	FMP which helps induce clear cutting will tend to increase open habitat which will favor browsers and grazers; improving and expanding road network and any new mines which develop will put greater pressure on wildlife, particularly game

Summary of Environmental and Military Consequences

Preferred Alternative	Alternative A	Alternative B	Alternative C	Alternative D
Military	<p>There will be no significant impact on military activities</p> <p>Minimizing training during September places some restraint on military operations; slightly less aggressive fire management program could increase smoke which could hinder training</p>	<p>Restricting civilian access will minimize possibility of interference with training; thorough cultural resource clearance will facilitate future military development; locked gates at all road entrances will be a significant inconvenience to troops</p>	<p>Allowing the public access without notifying the Army will create a significant safety problem and impede training; ceasing training during moose hunting season will significantly limit Army and Air Force training flexibility; signs would undermine troop orienting training</p>	<p>If many economic control facilities are instituted they will significantly restrict military training; mining operations, unless properly restricted, could interfere with training</p>



CHAPTER 2

AFFECTED ENVIRONMENT

53	Introduction
53	Socioeconomic Conditions
55	Air, Soil, Water, and Vegetation Conditions
60	Fish, Wildlife, and Their Habitat
62	Cultural Resources
62	Recreation
64	Lands and Rights-of-Way
65	Energy and Mineral Resources

Chapter 2

Affected Environment

Introduction

This chapter briefly describes the social and environmental setting of the planning area. The information in this chapter served as a basis in developing the alternatives discussed in Chapter 1 and in predicting environmental impacts of the alternatives in Chapter 3.

Socioeconomic Conditions



Demographic Characteristics

The population of the Fairbanks area has experienced periods of growth, decline, and stagnation. In 1970 there were almost fifteen thousand people in the city and more than thirty thousand more in the rest of the Fairbanks North Star Borough. The borough's population peaked in 1976, during construction of the Trans-Alaska Pipeline, at about seventy-two thousand. Nearly half of this number lived in Fairbanks. The population then fell until revived by the surge in state spending in the early 1980s. More recently, the rates of 7 to 8 percent growth experienced in 1984 and 1985 have ended. ("Fairbanks Demographics"; "Indicators of Change")

In 1980 the age and sex distribution of the borough did not vary dramatically from that of the state. Median ages were several months less than the state median of 26 and the distribution about that mean was similar. While the state average was 53 males for every 100 people, the average was 53.8 and 53.5 males in the borough and city, respectively. In the city the proportion of the population that was white was less than three percent above that for the state. Only 7 percent of the city's residents were Native. For the borough over 85 percent were white and less than 6 percent were Native. Thirty-six percent and 35 percent of the city's and borough's populations, respectively, had moved to the state in the five-years prior to 1980. (U.S. Bureau of the Census, 1982a, p. 7; U.S. Bureau of the Census, 1982b)

A survey of the area's population by the borough's Community Research Center in September 1985 noted only modest changes in demographics over the previous five years.

The median age increased one year to 27 and the sex ratio had moved a little closer to parity in numbers between the sexes --52 males for every 48 females. ("Fairbanks Demographics")

Economy and Employment

Government, led by the military, has long employed a far larger portion of Fairbanks-area inhabitants than any sector of the private economy. In the 1960s, when what became the North Star Borough in 1964 had about thirty-five thousand civilian inhabitants, there were nine thousand to ten thousand men and women in uniform. In 1980 47 percent of the region's workforce received government paychecks. ("Looking Back"; FNSB, Community Research Center, 1985, tables 12 and 16)

The proportion of the borough's workforce employed by government remained the same in 1986. By then 6,200 or 18 percent of nonagricultural wage and salary earners were in the military, nearly 3,400 of whom were assigned to Eielson Air Force Base. Nine percent of the borough's workers were federal civilian employees; about eighteen hundred of these worked for the Air Force or Army. Thirty-nine hundred people or twelve percent of the workforce labored for the state. Local government payrolls accounted for another 8 percent of employees. (Fried, 1986; Fried, 1987; "Contributions of the Military")

Fairbanks' private sector benefits from the town's role as the business, service, and transportation center for not only the Tanana Valley, but for much of the northern half of the state. The major employers included Fairbanks Memorial Hospital, Tanana Chiefs Conference, Golden Valley Electrical Association, Safeway, Super Valu Foods, Fred Meyer, and Foodland. ("The Major Non-Government Employers") Construction formerly accounted for a far larger proportion of Fairbanks' workforce than it did in 1986. As recently as 1985 it employed over 3,000 workers, but in 1986 it provided wages to only 1,800. Mining directly employed 100 people, or less than half of a percent of the borough's workforce. It benefits Fairbanks primarily through the demand it generates for goods and services. A study conducted in 1985 estimated that \$27 million, more than a third of the funds expended by the state's placer mining industry, found its way into Fairbanks. Less than \$4.5 million of this was derived from wages. (Fried, 1987; "The Mining Industry")

Community Facilities, Services and Finances

Municipal Utilities System (MUS), owned by the city of Fairbanks, provides much of the telephone and power service to the city. Golden Valley Electric Association and the Glacier State Telephone Company service other areas of the borough. MUS also provides water and sewer needs in the city. Elsewhere College Utilities Corporation and the city of North Pole provide similar service. (*The Fairbanks Factbook*, pp. 30-31)

Fairbanks North Star Borough gets the largest portion of its income from state revenue sharing and from property

taxes. In 1986 the former contributed nearly \$91 million and the latter over \$27 million. Federal revenue and miscellaneous other sources contributed another \$10 million. State funding in 1987 dropped \$16 million. Federal money also fell well short of the previous year. Recent increases in property taxes and other sources, will still leave the borough with \$12 million less to spend. ("A Historical Perspective")

Subsistence

Salcha Natives and those in a former semi-permanent camp at the mouth of the Chena River almost certainly hunted in what is now the Yukon Maneuver Area. (Andrews, 1977, v. 1:131 and 1975, pp. 70, 75) In the 1920s Salcha hunters concentrated their activity in the Salcha and Little Salcha drainages. But by 1945, the Natives had virtually abandoned that village and by 1962 there were no Native settlements in the Tanana Valley between Healy Lake and Nenana. (Andrews, 1975, pp. 31-32; McKennan, 1981, p. 566) These villages are each at least seventy miles from the YMA, and consequently the fort area has been little used by Natives for subsistence for many years.

There is no evidence that subsistence activity currently occurs on the YMA. As indicated above, residents of Fairbanks and nearby communities in the Fairbanks North Star Borough generally depend on wage-earning jobs to support themselves and their families. The closest communities which the State classifies as "rural" for purposes of subsistence fish and game allocations are Nenana and Minto, but studies by the Alaska Department of Fish and Game indicate that inhabitants of these places do not use resources on the YMA. (Shinkwin and Case, 1984, p. 39; Andrews and Napoleon, 1984, p. 5; ADF&G, 1986, p. 239c)

Air, Soil, Water, and Vegetation Conditions



Air

Fairbanks' average monthly temperatures range from -11.5 degrees F in January to 61.5 degrees F in July, yielding a yearly average temperature of 26.3 degrees F. The all-time low temperature recorded by the National Weather Service is -62 degrees F, and the highest temperature on record is 96 degrees F.

Average monthly water equivalent precipitation ranges from 0.29 inches in April to 1.86 inches in July. The average annual amount is 10.46 inches. Most of the yearly precipitation occurs during the summer and early fall. The record seasonal snowfall, 168 inches, occurred during the winter of 1970-71. Average annual snowfall is 67.2 inches. (Arctic Environmental Information and Data Center, 1986. Unless otherwise noted, air, soil, and water information is

from U.S. Army, 1980) Relative humidity at Fairbanks is low; the yearly average is 55 percent. During spring and early summer it is at its lowest levels, averaging 38 percent during mid-afternoon in May. The highest incidence of heavy fog occurs in December and January, with four and five days respectively being foggy. Ice fog, composed of innumerable small ice particles, is a persistent, localized fog at temperatures lower than about -30 degrees F. Most ice fogs occur near human settlements where moisture is exhausted into a cold, stagnant atmosphere by burning fuel.

Prevailing wind direction during June and July is from the southwest. At other times the prevailing wind direction is from the north, with an average speed of 5.3 mph. The greatest average wind speed occurs during the spring months, with a high of 40 mph recorded in Fairbanks. Winds are 5 mph or less approximately 60 percent of the time. The late spring and early summer are the only times of the year during which thunderstorms occur. There are about five such storms in a typical year.

Air quality in the Fairbanks and Fort Wainwright area is influenced by a combination of circumstances including a restricted geographic basin, low winds, and severe temperature inversions in the winter. As pollutant emissions increase because of regional growth, ambient concentrations also increase. The main source of carbon monoxide pollution is motor vehicles and combustion of other fuels. Major particulate emission sources include power plants, residential coal and wood combustion, forest fires, vehicle emissions and road dust. Other emissions are nitrogen dioxide, hydrocarbons, and sulfur dioxide.

Soils

Soils of the withdrawal area have been mapped in a broad exploratory level of survey. (Rieger, Samuel, et al., 1979) On south-facing slopes soils are generally well drained and free of permafrost, while poorly drained north slope soils are usually underlain by permafrost. South slopes are occupied by well-drained silt loams which grade from shallow gravelly silt near ridgetops through silt loams of mid-slopes to deep, moist silt loams of lower slopes. Drainage bottoms and depressions are occupied by shallow gravelly silt loam with a thick overlying peat layer and underlying permafrost. Soils of north-facing slopes are shallow gravelly silt loams with thick cover and permafrost.

The greater portion of the withdrawal area is rolling to hilly upland, occupied by silt loam soils developed in the silt mantle of hills and ridges bordering the Tanana River Valley.

Stratified silty to gravelly stream deposited materials occupy low terraces adjoining the Tanana and Chena rivers. Soils developed in these materials are well drained alluvial silty and sandy loams. Wet depressions are occupied by thick peat deposits and permafrost.

Potential availability for exposed soil from flowing water and wind is high for upland silts and moderate to low for

sandy loams and sandy materials of low river terraces. This condition causes severe limitations for use of these soils in construction for roads, airfields, and buildings.

Water

The Fort Wainwright study area lies entirely within the Tanana River drainage basin. Northern and northeastern portions of the study area are drained by the Chena River and its tributaries such as South Fork Chena River and Hunts Creek. The southern portion of the study is drained by the Salcha River and its tributary, Ninetyeight Creek. Streams draining the western portion of the study area flow directly into the Tanana River, or reach the Tanana River through Piledriver Slough. All of the tributaries originating in the study area have their headwaters in rolling, glacier-free terrain of the Yukon-Tanana Uplands at elevations of less than 2,000 feet.



Low stream discharges occur during the winter, due to permafrost, ice formation, and storage of precipitation as snow. Many small streams freeze solid (zero discharge) during the winter. Streamflow is maintained principally by groundwater in some streams. Peak discharges occur during the summer months as a result of spring thaw and ice breakup, and increased precipitation.

Surface waters are classified by the State of Alaska according to water-use categories. The Chena River from its confluence with Chena Slough to the confluence of the Chena River and the Tanana River has been designated as Class C (suitable for bathing, swimming and recreation) and Class D (suitable for growth and propagation of fish and other aquatic life including water fowl and fur bearers). The state has classified other fresh waters to be in their original and natural condition, and as such they are considered suitable to serve all uses. Nearly all surface water drainage from the study area would be expected to be acceptable quality for the uses established in the water quality standards. General lack of development and other human related activities preclude presence of man-induced pollutants and result in generally excellent water quality of the area streams and lakes.

Measurements of specific characteristics indicate the good quality of water on the Yukon Maneuver Area. Measurements of pH of water from streams and lakes in the general project area indicate most values to be within the limits established by the state's standards (6.5-8.5). Trends observed in the Chena River showed pH values slightly above neutral during the winter. Similar trends have been observed in the smaller streams of the study area. Concentration of nitrogen forms is high in relation to phosphate in the Chena River, thus phosphate may be the limiting inorganic nutrient for phytoplankton production. Iron is the only naturally occurring element in streams of the project area that may occasionally exceed recommended levels. U.S. Public Health Service standards recommend less than 0.3 mg/l of iron for waters that are being considered as a source for drinking supply. The high iron concentration in the lower portion of the Chena River may be attributable to surface water and groundwater drainage from the swampy, muskeg areas present throughout this section.

Sediment loading in streams of the study area would be expected to be low. Nonglacier fed streams in the Tanana River Basin generally carry less than 300 mg/l during high flow periods, and decrease to as low as 10 mg/l during low flow periods.

Samples collected from the Chena River indicate that biological oxygen demands (BOD) and chemical oxygen demands (COD) would also be expected to be low in the study area streams. BOD values are generally less than 1.0 mg/l and COD values range from 0-54.0 mg/l for the Chena River. Streams flowing through recently burned areas generally show an increase in COD as a result of organic material being

carried into water by increased surface erosion. Data for the Chena River indicate that fecal coliform populations are very low in the underdeveloped upper portions of the river, but increase significantly as the Chena River flows through the developed area near Fairbanks.

Plant Communities

Major vegetation communities in this area are coniferous forests, mixed forests, tall shrub, low shrub, and herbaceous wetlands. Factors affecting the type and pattern of the vegetation are permafrost, depth to water table, slope, aspect, and fires. (The following vegetation and forest type information is derived from U.S., Soil Conservation Service, 1986 and Alaska, Division of Geological and Geophysical Surveys, [1987].)

Most of the withdrawal is covered by open forests of stunted black spruce and mixed open forests of black spruce and birch. A low shrub layer may be present and mosses form the ground cover. This vegetation community is found mainly on the north-facing slopes.

On the south-facing slopes, closed deciduous forests of birch and aspen occur. Most of these forests are young post-fire reproduction stands. A low ericaceous shrub layer may be present. These forests occupy the well drained sites.

Closed forests of black spruce can be found in patches scattered throughout the withdrawal. Most of these forests are young fire reproduction stands. They occupy the poorly drained sites.

On narrow terraces adjacent to rivers are forests of white spruce, balsam popular, and aspen. Willow and alder shrubs are found in the understory.

A small portion of the withdrawal is covered by shrub and herbaceous plants. These vegetation communities occur on hilltops, narrow drainageways, and lake perimeters. Hilltops are covered by low mixed shrubs of dwarf birch, willow, and ericaceous species. Just below the hilltops, a zone of tall shrub (alder and willow) occur on disturbed sites adjacent to roads. Many small lakes lie scattered in the lowland forests on the western side of the withdrawal. Along the lakeshores a narrow zone of moist and wet graminoid vegetation can be found.

Timber Resources

Commercial forests are identified as closed and open coniferous forests of white spruce; closed deciduous forests of paper birch, or birch and aspen; and closed mixed forests of black spruce, white spruce, and birch. Closed deciduous forests of paper birch and aspen make up one-half of the commercial forests within the withdrawal. Most of these forests are pole size (5 to 9 inches DBH for conifers and 5 to 11 inches for deciduous), young post-fire reproduction, or recently burned stands. They are generally found scattered throughout this area on south-facing slopes.

In this area woodland forests are identified as closed forests of black spruce, or black spruce and white spruce, and

closed mixed forests of white spruce and birch. The major portion of the woodland forest is composed of closed black spruce. Most of these are young fire reproduction stands. Large patches of woodland forests are concentrated in the northwestern portion of the withdrawal and small patches are scattered throughout the area.

Most of the withdrawal is covered by noncommercial forests. A large portion of this forest is made up of open mixed stands of black spruce and birch, and open stands of black spruce. These are dwarf forests (mature stands which are less than twenty feet high) or young fire reproduction stands.

The biological condition of the timber resource is affected primarily by fire, insects, and disease. Because of the frequent fires, many of the stands are immature. The spruce beetle (*D. ruffipenis*) is most damaging to the white spruce stands. The potential for an outbreak is always present. While no specific-site data on disease is available for the withdrawn lands, a study of interior forests estimates that 37 percent of the white spruce, 47 percent of the birch, 78 percent of the poplar, and 82 percent of the aspen in the region have decay in the merchantable stem. (Hutchison, 1967, p. 38)

Fish, Wildlife, and Their Habitat



Much of the wildlife in the Yukon Manuever Area is made up of forest species due to the predominance of this habitat type in a significant part of the withdrawal. Because mature forests offer poor habitat, much of the area has low populations of many wildlife species found throughout the rest of interior Alaska. No wildlife species is particularly important on the withdrawal and the YMA is not important to any wildlife species in interior Alaska.

The lack of surface water resources precludes significant aquatic biota and far superior terrestrial habitat for most species exists in land near the withdrawal. Fish that are present include arctic grayling, northern pike, and, to a very minor extent, humpback whitefish, king salmon, and chum salmon. Mammals that occur on the YMA are moose, grizzly bear, black bear, lynx, grey wolf, coyote, red fox, marten, ermine, least weasel, mink, wolverine, river otter, porcupine, hoary marmot, beaver, muskrat, arctic ground squirrel, red squirrel, and snowshoe hare.

Direct observations during surveys have found the most common bird species to be alder flycatcher, American kestrel, hawk owl, great-horned owl, yellow-rumped and orange-crowned warbler, common and hoary redpoll, dark-eyed junco, hairy woodpecker, red-tailed hawk, spruce grouse,

ruffed grouse, mew gull, grey jay, common raven, black-capped chickadee, American robin, varied thrush, hermit thrush, Swainson's thrush, grey-checked thrush, Bohemian waxwing, and snow bunting. Although other birds are known to migrate over the YMA, they are missing from the list due to no confirmed sightings during the period from 1982 through 1987. (Kerns, MSA)

Moose

Moose density in the YMA range from around 0.1 moose/mi² in some of the predominately black spruce habitats to slightly higher density in the few better habitat areas such as Nintyeight Creek, in the southeast corner of YMA, during early winter. Most of the moose of this area move into the Tanana Flats during the spring and return in the early fall. Hunters harvest approximately twenty bull moose from the YMA each fall.

**Fish and Wildlife
Habitat
Condition**

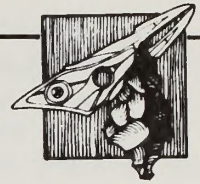
The aquatic habitat of the YMA, though very limited in quantity, is of fairly high quality. Most of the streams are shallow, gravel bottomed, and have clear water through most of the summer. Some degradation occurs on Stuart Creek due to its use as an impact area for the Air Force and Army. Also, Pine Creek, which runs into Beaver Creek has had increased sediment loading due to mining. These streams are normally dry during winter. Horseshoe Lakes (Sec. 1, T. 2 S., R. 3 E., F.M.) are probably the only lakes in the YMA which do not freeze solid to the bottom. The quality of these lakes is good.

The terrestrial habitat has been influenced by the fire history of the area. More than four dozen fires have occurred in the YMA over the last twenty-five years (1962-1987). Parts of Stuart Creek Impact Area routinely burn due to fires caused by the military's live-fire activities. But lightning has caused some of the larger fires on the withdrawal, including the largest, a 56,640 acre burn in 1969 in the Ninetyeight Creek drainage. In 1987, a fire of nearly eleven thousand acres burned in the vicinity of the AFTAC Site in the northwest portion of the withdrawal. These fires have had a positive effect on the habitat of the YMA by helping to maintain diverse habitat on part of the withdrawal. (Kerns, MSA; Rowdabaugh, MSA)

**Threatened and
Endangered
Species**

No threatened or endangered species are known to exist in the YMA; there currently are no threatened and endangered species recovery plans for the withdrawal area (Kerns, MSA).

Cultural Resources



Although there is reason to believe that paleontological, archeological, and historical resources exist on the YMA, archeologists have not discovered many sites. The remains of Pleistocene vertebrates probably are buried in the creek bottoms, but there is no record of any having been found. (Lindsey, 1987) Native villages situated at the mouths of the Chena and Salcha rivers probably included the withdrawn lands in their subsistence areas, yet there are only eight known prehistoric sites on the YMA. (Andrews, 1977, v. 1: 131 and 1975, pp. 70, 75) Investigators have found no historic sites, despite the area having been prospected in the turn-of-the-century decades and a trail having extended up the South Fork Chena River in the 1920s to serve trappers. (ARC, 1929, II:79)

A major reason for the paucity of discoveries of cultural sites on the withdrawn lands is that archeologists have examined less than 5 percent of this portion of Fort Wainwright. Researchers have only examined the area west of Johnson Road and Skyline Drive. Of the eight known sites, seven are not eligible for the National Register of Historic Places. The exception, (XBD-095), is on Quarry Road and is vulnerable to disturbance by road maintenance and use of an adjacent quarry. (U.S. Army COE, 1986, pp. 7-54.)



Recreation

The 125 miles of roads and trails in the Yukon Maneuver Area are the key to the recreation resources. The road condition ranges from pavement to the most primitive unmaintained four-wheel drive and ORV roads. Hunters use the landing strip at Pine Creek in the fall.

Although there are no data available on the number of people recreating on the lands, it is clear that the most popular recreational activities are hunting and ORV and snowmobile use. Residents of Eielson AFB, are the primary recreational users of the YMA because it is so close to their home and easy to access. The general public feels uneasy about driving into an area with warning signs, restrictions about entering, and requirements for permits. Military residents of Fort Wainwright headquartered much closer to Fairbanks can access the area easily, but they can enjoy

similar recreational opportunities closer to home along Chena Hot Springs Road and the Steese Highway. (Butts, MSA, Recreation)

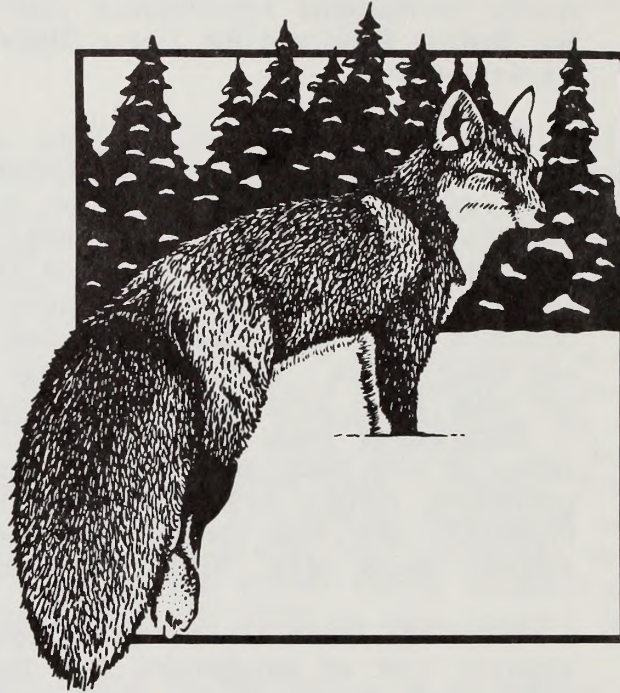
Visual Resources The visual character of the YMA is rolling plateau lands. The characteristic landscape is spruce forest intermingled with aspen and birch strands. The highest points of plateaus are open tundra composed of shrubs, lichen, and grasses. From the air the forested landscape is broken by distinctive clearings, blackened or burned areas, muskeg, military maneuver and drop zones, vehicular pathways, firebreaks, and moist tundra. From most vantage points at ground level, the solid forest cover hides these features.

Backcountry roads and trails of the maneuver area provide access to wild lands for many new residents of Alaska, particularly Eielson AFB personnel. This is where many experience their first viewing of moose, bears, and other animals. (Butts, MSA, Visual Resources)

Fishing Horseshoe Lakes has a natural population of pike and is accessed over an unimproved road through a marshy area, which limits its use in the summertime, or to winter use when the wet areas are frozen. Horseshoe Lakes and the surrounding area also are used for duck hunting. The South Fork Chena River is accessible by a four-wheel drive road from Eielson AFB across the north part of the maneuver area. The South Fork has excellent grayling fishing but it is seldom used because of the difficult access. (Alaska Department of Natural Resources, 1984)

Skiing Eielson AFB has a ten kilometer cross-country ski trail system which lies partly on the maneuver area and is covered by a joint use permit from Fort Wainwright. This ski area is open to anyone, but it is used mostly by Eielson AFB personnel and families. (Butts, MSA, Recreation)

Hunting and Trapping The primary recreational uses occur during the hunting season and on weekends. Roads allow substantial hunting opportunities. In 1986, 1,047 hunting permits were issued by Eielson AFB, most of which were used on the maneuver area, as Eielson permits can be used on Fort Wainwright land. Only sixty-three of the permits were issued to civilians. Eielson issued about 150 permits to military personnel in their first year in the state. These first year military permittees can hunt on military land without buying expensive nonresident state permits. In addition to these permits, Eielson wrote permits for about 150 snowmobiles and over 500 permits for ORVs (three- and four-wheelers). Most use of these vehicles occurred on the maneuver area. It is not possible to estimate how many non-Air Force personnel used ORVs on the withdrawal.



Four thousand hunting permits are issued at Fort Wainwright, 1,000 of which are issued to civilian and 3,000 are to military. From check stations operated on the maneuver area in 1985, it is estimated that about one-half of these permittees used the maneuver area. In recent years fifteen trapping permits have been issued at Fort Wainwright for exclusive trapping areas. Eighty-seven permits for bear bait stations were issued in 1987. (Butts, MSA, Recreation)

Lands and Rights-of-Way



Lands

The planning area is withdrawn by Public Law 99-606, the Military Lands Withdrawal Act of 1986. The lands have been under a withdrawal for military purposes since 1961. There is a large impact area within the planning area used for aerial gunnery training. There are two NIKE sites and an Air Force Technical Applications Center (AFTAC) within the planning area. The NIKE sites are withdrawn by Public Land Orders 1345 and 1523. (Everett, MSA, Lands)

There are three mining claim recordations (F-54744 through F-54746) within the planning area located on Pine Creek in T. 2 S., R. 7 E., F.M. Access to these claims is obtained by a landing strip and a road connecting it to the claims. These claims were originally staked in 1923, predating the military uses by almost four decades.

Rights-of-Way

The Trans-Alaska Pipeline System (TAPS) right-of-way goes through the extreme western part of the withdrawal for short distances in two places. TAPS was authorized by the Trans-Alaska Pipeline Authorization Act of 1973. The right-of-way width is fifty feet plus the ground occupied by the pipeline (generally four feet). The pipeline is used to transport hot crude oil from Prudhoe Bay to Valdez. Alyeska Pipeline Service Company manages the oil pipeline. Adjacent to TAPS is a right-of-way for the proposed Alaska Natural Gas Transportation System (ANGTS), a chilled gas pipeline to be managed by Northwest Alaskan Pipeline Company. The ANGTS right-of-way width is the same as TAPS. The ANGTS alignment deviates from TAPS and cuts somewhat deeper into the northwest corner of the withdrawal.

There is a pending application for another adjacent right-of-way for the Trans-Alaska Gas System (TAGS). TAGS will be managed by Yukon-Pacific Corporation. BLM anticipates granting a right-of-way for TAGS by September 1988.

Energy and Mineral Resources

**Coal and Fluid Minerals**

According to data compiled by BLM's Division of Mineral Assessment, the land in this withdrawal is without value for coal, oil, and gas. No interest has been expressed in coal or in oil and gas exploration or development on this land. (Bissonnette, MSAs, Coal and Fluid Minerals)

Non-Energy Leasable Minerals

A literature search on nonenergy leasable minerals on Fort Wainwright has revealed no information on any of these minerals. There is no record or knowledge of occurrence of any of these minerals, which include phosphate, sodium, potassium, sulphur, and gilsonite. No public interest or concerns have been expressed regarding any of these commodities. (Bissonnette, MSA, Non-Energy Leasable Minerals)

Locatable Minerals

The rock in the YMA are dominantly Birch creek schist and Mesozoic igneous rocks. Birch Creek schist in the area includes quartzite, quartz-, mica-, graphite-, carbonate-, hornblende-, and chlorite-rich schist, crystalline limestone, amphibolite, and gneiss. Igneous rocks include quartz diorite, biotite granite, granitic and dioritic porphyries, and small amounts of peridotite and olivine basalt. (Berg and Cobb, 1971) The uplands are generally covered by a blanket of loess derived from the pro-glacial flood plains of streams from the Alaska Range. (Cobb, 1968)

The mineral potential of the area is classified (M/C) according to the guidelines in Manual Section 3031.34. The level of potential is moderate (M), based on similar adjacent

geology and mineral occurrences. The level of certainty is (C), meaning that there is direct evidence of mineralization but little data on the quantity is available to support an estimate of the reserves.

There are three federal placer claims on Pine Creek in the northeastern part of the withdrawal. These claims antedate the establishment of the military withdrawal in 1961, since which the land has been closed to mineral location. There has been no mining on these claims for several years and there are no records of their production. Access to the claims is via a small airstrip located on a hilltop east of the claims, and a road from the strip to the mine.

Minor amounts of placer cassiterite (tin) on Pine Creek have been reported (Joesting, 1942), but no quantitative value was given. Historical records show a claim having been staked on a tributary of French Creek in the southwest part of the withdrawal. No claim on this creek exists at the present time and no records of production are available for it. (Bissonnette, MSA, Locatable Minerals)

Mineral Materials The mineral materials potential of the area is classified (M/D) according to the guidelines in Manual Section 3031.34. The level of potential is moderate (M), and the level of certainty is (D), which indicates abundant direct and indirect evidence to support the existence of mineral materials.

There is potential for the occurrence of mineral materials in areas along the western boundary of the withdrawal. This is based on geological maps showing alluvial sand and gravel deposits. Minor deposits of limited areal extent along stream valleys in the interior of the withdrawn area may be available for very localized use.

No mineral material activities are proposed or ongoing at the present time. There are records of two Alyeska (TAPS) material sale sites in the French Creek area within the withdrawal. These sites are no longer active. Several other material sales and free use gravel pits are located close to the withdrawal along the western side.

At the present time, mineral materials may be extracted from land in the Fort Wainwright withdrawal with the nonobjection of the Army. Any mining operation would be subject to BLM mineral material disposal regulations under 43 CFR 3600. (Bissonnette, MSA, Mineral Materials)

Mineral material sites on Fort Wainwright would most likely be limited to small areas along the western border near the Richardson Highway and TAPS. Road work both inside and outside the withdrawal and construction of the TAGS and ANGTS are the primary potential users of the materials. There is a lesser possibility of need for sites along trails in the interior of the withdrawal, which may occasionally require maintenance.

CHAPTER 3

ENVIRONMENTAL CONSEQUENCES



67	Introduction
67	Development Scenarios
71	Environmental Consequences Common to All Alternatives
73	Environmental and Military Consequences of the Preferred Alternative
79	Environmental and Military Consequences of Alternative A
81	Environmental and Military Consequences of Alternative B
85	Environmental and Military Consequences of Alternative C
87	Environmental and Military Consequences of Alternative D
89	Summary of Section 810(a) ANILCA Findings for All Alternatives
89	Unavoidable Adverse Impacts
90	Short-term Uses versus Long-term Productivity
90	Irreversible and Irretrievable Commitments of Resources

Chapter 3

Environmental Consequences

Introduction

This chapter addresses three concerns. First, it presents estimates of the forest harvesting and mining which could occur under the various management plans presented in Chapter 1. The envisioned scenarios comprise the best projections of members of the Army-BLM planning team, and are a basis for estimating the environmental consequences of the alternatives. The chapter then describes the anticipated effects of implementation of the different plans on air, soil, water, vegetation, wildlife and wildlife habitat, visual resources, the local economy, and subsistence. Finally, because of the importance of recognizing the military's use of the lands in determining the appropriate management alternative, the chapter also portrays the potential impact of the alternatives on military activities.

Development Scenarios

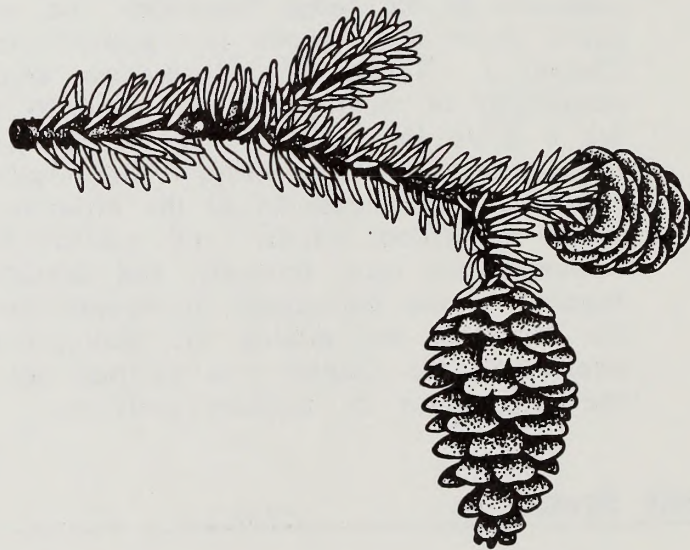
Preferred Alternative

Forestry

Initial review of the forest resources of Fort Wainwright's Yukon Maneuver Area indicate that there are few, if any, stands of trees suitable for saw timber or house logs. However, there is some potential for fuel wood harvests, for which there is demand in the Fairbanks area. (ADNR, Div. of Forestry, Annual Report 1985) Consequently, the most likely development of timber resources would be of fuel wood for commercial or personal use.

Personal use harvesting would be open to all and would primarily involve individuals gathering firewood, possibly limited to dead and down, near the road network and transporting the material home in personal vehicles. Any commercial harvests of stands of saw timber, house logs, or fuel wood which are economical to access, probably would be made by clear cutting of a hundred acres or less. Because the best stands occur on slopes, special care may be needed in clear-cut harvesting to avoid soil erosion. Also, because some mid slopes are too steep for light crawler or rubber-tired tractors, large timber harvests would likely be limited to slopes of less than 30 percent near the major existing roads on the Yukon Maneuver Area. A possible means to overcome this restriction on harvesting the steeper slopes would be to

employ cables to transport logs up the steeper slopes to yarding areas near the ridgetop road network. However, this method adds to the expense of an operation and may prove uneconomical. Timber operators would yard the logs near the roads and then transport them out of the area on trucks. Loggers would burn residue after the harvest to control insects and disease, reduce fuel, and promote regeneration of white spruce, birch, and aspen.



Minerals

The Preferred Alternative calls for a mineral assessment of the withdrawal. An assessment for Fort Wainwright most likely would begin with a search of literature for evidence of mineralization followed by a ground survey of selected portions of the withdrawal. The plan allows for the opening of the withdrawn lands to the operation of the mineral laws after an assessment, consideration of impacts to the military's mission, and promulgation of regulations "to assure safe, uninterrupted, and unimpeded use of the lands" by the military.

Preliminary literature searches indicate that there is no leaseable mineral potential, that lode mining is very unlikely, and that there is limited potential for placer mining. If the assessment indicates sufficient mineral value and other criteria are met so that the withdrawal or some portion of it is open to the operation of the mineral laws, field sampling may commence. In typical placer prospecting, if panning or geochemical sampling of creek beds indicates a promising area, further testing of the deposit can be accomplished by digging sample holes or trenches perpendicular to the course of the stream channel. Miners use earth moving equipment, churn or rotary type drills, or hand equipment to dig the holes or trenches.

It is unlikely that any mine in addition to that already located on Pine Creek would develop in the YMA. However, if one does prove feasible, it probably would be a small placer mine employing about three people and working about four acres a year in the South Fork Chena River basin. It would require either continued use of a trail a mile and one-half long from the Pine Creek landing strip or a new road from either a branch of the Beaver Creek Road or Brigadier Trail. The roads would be at least a mile and one-half long. Since such a road would impact at least three acres, the total operation would exceed five acres impacted each year and require that a plan of operations be submitted to and approved by BLM before mining begins (43 CFR 3809). Such an operation might use heap leaching techniques as well as the standard earthmoving and gravel-washing equipment. Heap leaching involves the use of a weak cyanide solution sprayed over low grade crushed ore. The cyanide solution dissolves gold and silver which leaches through the heap of material to a solution pond from which the precious metal is extracted. Other activities or support facilities at a typical placer mine include exploration of new ground to be mined in the future; construction and maintenance of equipment sheds, bunk houses, cookhouses and workshops; and repair and reconditioning of equipment used at the mine.

Besides allowing mineral materials sites for Department of Transportation and Public Facilities (DOT/PF) projects as mandated by law, the Preferred Alternative would permit sale of mineral materials. The proposed Trans-Alaska Gas System (TAGS) or Alaska Natural Gas Transportation System (ANGTS) pipelines are the most likely buyers of Fort Wainwright's sand and gravel. BLM projects that the DOT/PF may require two mineral material sites and that TAGS or ANGTS would want to purchase sand and gravel from at least one such site in the withdrawal along their routes. Mineral material sites generally are developed as near as possible to the location the material is to be used. Most of the sites to be developed on Fort Wainwright's YMA probably would be located on the western edge of the withdrawal near the fort's current road network or within three-quarters of a mile of the rights-of-way for the pipelines.

Alternative A

Under Alternative A, which reflects a continuation of current management, active duty and retired military personnel and current civilian employees at the fort are able to gather firewood and the Alaska Department of Transportation and Public Facilities and private developers can still obtain mineral materials with federal government approval. Sand and gravel extraction is the same as outlined in the Preferred Alternative. No other mining is allowed under Alternative A.

Alternative B

Alternative B would place greater restrictions on public use of the withdrawal than currently exist. Access for virtually all nonmilitary activities would be prohibited. The withdrawal would remain closed to mining locatable or leasable minerals and the federal government would attempt to reduce mining on the fort by purchasing existing valid claims on Pine Creek. DOT/PF projects would be eligible to use sand and gravel from the withdrawal, but sales of mineral materials would be forbidden. Some timber harvests would be allowed, but these would only be in areas the military needs land cleared. No personal use firewood harvesting would be allowed, except in conjunction with such a clearance of land for the military's mission.

Alternative C

The emphasis of this alternative on personal use harvests of fuel wood would favor thinning of large acreages, possibly as many as 5,200 acres during the life of the withdrawal, over clear cutting of smaller tracts. These thinning operations would be conducted by individuals and would be limited to areas near the road and trail network. Some clear cutting of commercial stands of saw timber, house logs, or fuel wood as described for the Preferred Alternative could occur.

There would be no development of new mines other than those for sand and gravel. These would be as described in the Preferred Alternative.

Alternative D

This alternative's intent is to strive to realize the potential of the commercial resources on the withdrawal. It would be more likely than the other alternatives to utilize clear cutting to harvest forest resources. It also permits the operation of mineral location and leasing laws. However, there is no indication that any leaseable minerals exist on the withdrawal. It is also questionable whether mining for locatable minerals would prove feasible on Fort Wainwright. Should a placer mine develop on the withdrawn land, the scenario for such an operation would be similar to that for the Preferred Alternative, except that Alternative D opens the withdrawal to the operation of the mineral laws only pending the promulgation of regulations--a mineral assessment would not precede such an opening. The development of sand and gravel would be as outlined for the Preferred Alternative.

Environmental Consequences Common to All Alternatives

Air, Soil, Water and Vegetation

Land uses will comply with federal and state laws and regulations related to air, water, soils, and vegetation. Any statements about potential erosion and sedimentation differences among alternatives mostly refer to slight differences in low potentials. With continued full compliance, there should be only small impacts on air, water, soils, and vegetation. Realistically, there are lapses in surveillance and compliance and some impacts do occur. All of the proposed actions for this plan have the potential to impact air, water, soils, and vegetation resources in the withdrawal. Effects depend on the degree of use, type of development, and the location of the activity on the landscape.



Fine grained materials in the soils of the withdrawal and the presence of shallow ice-rich permafrost make it likely that disturbance or removal of the insulating ground vegetation would result in soil erosion. Water from the melting ice may percolate through the soil or run down slope, transporting soil with it. The extent of erosion would depend on the steepness of slope, aspect, amount of ice in the ground, severity of disturbance or removal of the vegetative ground cover, and the type of mitigation applied.

Settling of sediments or dust into interstices of the stream beds can damage fish habitat. Dust, generated by traffic or winds, settling on leaf surfaces can interfere with light absorption and gas exchange and decrease plant photosynthesis and respiration. Dust which accumulates on snow decreases the amount of solar energy reflected off the surface and increases the rate of spring snow melt. The amount of dust generated from man-caused erosion is small compared to large naturally exposed areas in river floodplains and glacial outwash plains.

Under all alternatives, the DOT/PF may obtain sand and gravel from the withdrawn lands. Approximately two sites might develop on the fort. All the alternatives except Alternative B also allow sales of mineral materials. TAGS and

ANGTS might both want to purchase sand and gravel from at least one site. A mineral material site may have little or no organic materials that must be stripped and saved for future resspreading, or the site may have from one to six feet of material that is pushed to one side and saved. Bulldozers strip the overburden and break up the consolidated material. Bulldozers can generally dig to a depth of ten to twelve feet. If the material is deeper, drills are used and a series of holes are loaded with explosives and detonated, fracturing the material. The material is loaded into dump trucks by front end loaders or backhoe excavators. The trucks then haul the material to the location where it is needed. On big jobs with short hauls, because of speed and lower operation costs, operators use scrapers instead of dump trucks and front end loaders.

Authorized officers can require specific measures in reclamation plans (43 CFR 3602.1-2). Reclamation of material sites often includes the following actions. The sides of the resulting pit are sloped to a 3:1 slope gradient or less. The floor of the pit is leveled to prevent the accumulation of water which may become a hazard to animal and human life. The saved topsoil and organic material are then resspread over the side slopes and access roads and fertilizer is applied to allow reestablishment of natural vegetation and to decrease erosion. Seeding or planting may be used in areas where quick revegetation is needed.

Cultural Resources

Fulfilling the Army's *Historic Preservation Plan for U.S. Army Lands in Alaska* would document about forty additional cultural resource sites. Based upon past experience in this area, approximately 20 percent of these, or eight sites, would prove eligible for the National Register of Historic Places.

Subsistence

None of the alternatives would have any notable impact on subsistence. There is little or no subsistence use of Fort Wainwright's Yukon Maneuver Area, although, except for its impact area and the AFTAC site, it is open to such use. Subsistence users are at some distance from the withdrawn lands and have easier access to a plentiful supply of a variety of species closer to rural villages, such as Minto and Nenana.

ANILCA 810(a): Consideration of the Availability of Other Lands and Other Alternatives

Throughout the planning process, the joint BLM-Army team has planned for all the Fort Wainwright Yukon Maneuver Area lands which required such an effort as a result of the Military Lands Withdrawal Act of 1986. It also addressed planning for two sites withdrawn for military purposes which formerly contained Nike sites. These two sites are wholly encompassed within the YMA. Consequently, this planning effort is considering all appropriate lands so that there are no "other lands" which could be considered. The five alternatives discussed in this section constitute the "other alternatives" required by ANILCA Sec. 810 for consideration.

Environmental and Military Consequences of the Preferred Alternative

Air, Soil, Water ORVs and Vegetation

Regulations [43CFR 8341.1(f)(4) and .2(a)] give minimum standards for operating ORVs on public lands. They provide that ORVs shall not cause undue damage or disturbance to soil, wildlife, wildlife habitat, improvements, or cultural or vegetative resources. Initial damage from ORVs can range from crushing to uprooting of vegetation. Some crushed vegetation can regenerate and recover within one year, while other plants require much longer. Uprooting of vegetation and disturbance of vegetative ground cover renders the underlying soil unprotected, creating the potential for erosion or ground subsidence. The restrictions proposed in this alternative on nonmilitary ORV use lessen the potential for damage to soil, water, and vegetation. These restrictions limit the weight of ORVs used and also limit ORVs to travel over specific routes during summer and to periods of adequate snow cover. Under equal conditions, the lighter vehicles would inflict less damage to the vegetation than heavier vehicles. A thick layer of snow would help protect the vegetation from damage under tracks and tires, thereby, protecting the underlying soil. Although limiting travel to low erosion soils would not protect the vegetation and soils from disturbance, it reduces the potential for erosion and sedimentation.

Forestry

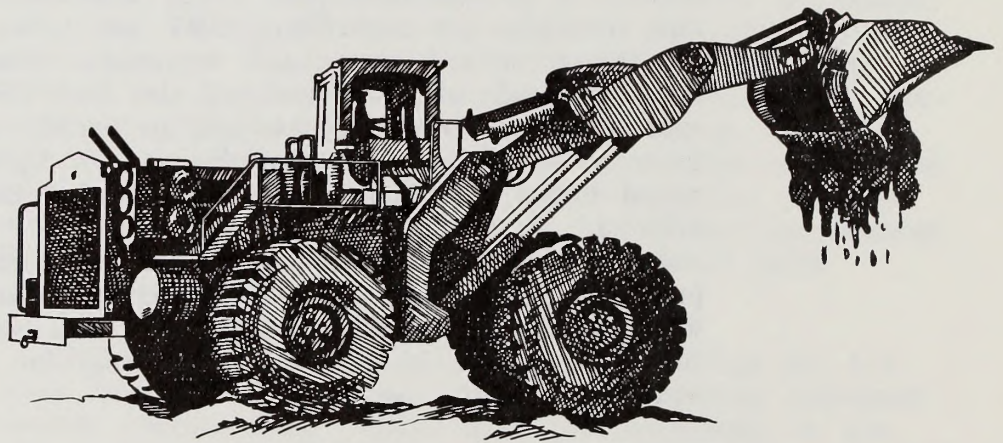
Personal use fuel wood harvesting would have little, if any, impact on these resources. But commercial harvesting would pose a potential for erosion when the vegetative ground cover is disturbed or removed on the moderate to steep slopes which predominate through much of the YMA. Regeneration on actively eroding areas would be delayed until the soil stabilizes. Adverse impacts due to soil erosion can be controlled by confining harvesting to well drained soils on slopes of less than 30 percent and by buffering sensitive streams.

Placer Mining

Mining can have substantial impacts on these resources. Placer operations may involve hydraulic, mechanical, or drift mining techniques. Bulldozers or draglines generally remove the overburden, although hydraulic monitors may be used. The amount of overburden removed in stripping operations varies from one to ten feet or approximately 1,600 to 5,300 cubic yards per acre stripped. Where the land is cleared for roads and mining, a potential for erosion and sedimentation is created through runoff from rain and snow melt..

Bulldozers loosen pay gravels and push it into a pile for feeding onto a sorting device called a grizzly. Normally,

miners in a small operation like that described in the scenarios for the Preferred Alternative would process from 10 to 1,000 cubic yards of gold bearing gravels per day throughout the nearly one hundred day season and use from 100 to 3,000 gallons of water per minute to wash the gravels. Typically, between 50 and 90 percent of the water used in the processing system is recycled from the settling ponds and the rest is made up from streams diverted around the operation. Coarse tailings are removed from the processing area by bulldozer or loader and stacked for later reshaping or used to build settling ponds.



Federal regulations, specifically 43 CFR 3809, requires rehabilitation measures. Generally, properly designed, constructed, and maintained ponds are capable of settling most settleable solids required by the Environmental Protection Agency (EPA) and Alaska Department of Environmental Conservation. Ponds are not capable of removing all the turbidity that is created during the processing phase. Additional treatment of the mine water through the use of flocculants, ground filtration systems, total recycle of all mine waters, redesign of the processing plant, or a combination of the above is necessary to reduce turbidity.

Heap leaching poses dangers of cyanide reaching the area surrounding the leach pile. To prevent this the ore is placed on an impermeable pad of asphalt, reinforced concrete, or geosynthetic material and the solution with the dissolved precious metals drains to a pond with an impermeable liner. Surface drainage must be diverted from the pad and pond and the area or a secondary liner or leachate collection system must be monitored by sampling and testing to determine

whether any contamination of the groundwater takes place. Ponds should be designed to handle the runoff from a one-hundred year flood, plus twenty four hours of drainage from the heaps. (Lopes and Johnston, 1988)

The coarse tailings not used for other mining purposes remain after the area is mined out and are reshaped to harmonize with adjacent natural contours. Topsoil required to be saved is respread over the reshaped ground to promote vegetation by natural species or according to requirements in the approved plan of operations. If any mine develops on the withdrawn lands and it has the typical amount of fines in its tailings, it will normally take over thirty-five years to establish a stable, sustaining productive community of open tall shrubs. This is generally a tall willow or alder community with a canopy cover of at least 50 percent in vegetated areas, where dying vegetation is replaced by seed or vegetative means. Such a community can sustain moderate pressure from wildlife, especially beaver or browsing moose, and may continue on the site indefinitely, or be successional to a deciduous forest with mixed spruce. Fertilizer is sometimes applied to improve plant nutrition. Seeding or planting may be used where quick vegetative cover is essential.

Fire

Fires result in beneficial and adverse impacts. The effects vary with fire severity. Generally, after a fire, the underlying soil exhibits an increase in active layer thickness and available plant nutrients. This results in a more productive site and plants respond with vigorous growth. Fires that burn through the insulating vegetative ground cover could result in thawing of the underlying permafrost. On slopes, permafrost rich in ice could release enough water to cause mass downhill movement of soil. Should the soil move into drainages, sedimentation of nearby streams would occur.

These impacts could also occur as a result of suppression activities. Firebreaks are continuous strips one to eight feet wide where all the surface organic material is removed, exposing mineral soil. Returning organic matter to the strips, seeding, or use of water bars to divert water from highly erodible areas of firebreaks could reduce erosion.

Fish and Wildlife

The Preferred Alternative may lead to greater habitat diversity on the YMA. Currently, the withdrawn land is primarily a woodland habitat. To the extent that clear cutting is found appropriate in the Forest Management Plan, this alternative would promote greater habitat for species such as moose and small game and nongame mammals and birds. These same species are likely to be the beneficiaries of efforts to improve the fort's vegetation in the course of developing the YMA's military, recreational, and economic potential and in following the Habitat Management Plan. However, the Preferred Alternative's fire suppression plan, which is

moderately more aggressive than the current plan, may slightly decrease the amount of new grazing and browse habitat created by fire.

Access requirements are not substantially altered, but the amount of hunting on the withdrawn lands may slightly decrease due to the creation of limitations on where ORVs are permitted to travel in other than winter conditions. This may decrease the current harvest of about twenty bull moose per season. But if more mining ultimately develops on the withdrawal, miners would probably account for some small increase in the take of game animals. Mining activity itself should not impact wildlife in any important way. However, if miners fail to properly dispose of garbage, they would attract animals to their camp. Bears attracted to garbage threaten human life and property and are often destroyed.

Visual Resources The most significant degradation of the visual values of the withdrawn lands would probably be from mineral material extraction. Sand and gravel sites would most likely be near the road network and near the routes of TAGS and ANGTS. However, this impact can be limited if operators properly rehabilitate the sites as indicated on page 72. Timber harvests are also most likely to occur along the road network, but their visual impacts would be lessened by retaining an uncut buffer along major recreational roads.

Cultural Resources Impacts to cultural resources would be sporadic and unique to each development undertaken. Small timber harvests and mining could disrupt cultural materials. However, a survey prior to clear cutting or mineral extraction should retrieve any archeological or historical information likely to be disturbed by loggers or miners. Testing, evaluating, and, if appropriate, excavating archeological site XBD-095 would preserve its cultural information.

Socioeconomics By preserving current opportunities for hunting, fishing, trapping, and other recreation on the YMA, the Preferred Alternative would continue to allow the local economy to benefit from supplying recreationists' needs and from gaining the meat and fur value of the fort's wildlife. BLM estimates the approximately 9,000 visitor days which the withdrawn land currently receives and would continue to receive under the Preferred Alternative contributes about \$800,000 to the area's economy. Most of this supports the activities of hunters who are the primary recreational users of the land.

It is uncertain whether this part of Fort Wainwright would provide any saw timber or house logs, but there is good reason to believe that the YMA could produce fuel wood for personal and commercial harvests. Saw timber sells for about \$300 per Mbf and cord wood is about \$85 delivered. Currently, active and retired military personnel and current civilian employees at Fort Wainwright obtain about twenty cords of

dead and down firewood a year from the YMA. The Preferred Alternative would not limit who can partake in such gathering, probably would permit some cutting of live fuel wood, and may well allow commercial fuel wood cutting. However, it is uncertain how great the consequent increase in the value of the firewood harvested would be.

Permitting the sale of sand and gravel would assist private development. Mineral materials are available on State and private land near the fort. But transporting them to projects developed on the withdrawal, such as the projected gas pipelines, would be far more expensive than utilizing readily available resources at the development site. Although the proceeds from gravel sites vary widely, a rough estimate is that for every mineral materials sale site, the federal government would obtain about \$100,000.

Because of the uncertainty of the feasibility of mining on the withdrawn lands, it is exceedingly speculative to estimate the economic impacts of opening them to the operation of the mining laws. However, if a small placer mine such as outlined in the scenario descriptions above developed, it would probably employ three seasonal miners and result in adding one full-time job equivalent to Alaskan employment. The average mine of this size generated about \$77,000 for the Alaskan economy in 1985. (Alaska, Department of Commerce and Economic Development, 1986, pp. 6, 15) The extant Pine Creek mine probably is this type of small operation.

Military

None of the actions prescribed by the Preferred Alternative would significantly restrict military training.

Compliance with Section 810 (a) of ANILCA

Uses and Needs

The Preferred Alternative would leave the Yukon Maneuver Area substantially open for any ongoing subsistence use which, at present, is low to nil. Such usage is not likely to increase, since subsistence users are at some distance from the withdrawn lands and have easier access to a plentiful supply of a variety of species closer to rural villages, such as Minto and Nenana.

Section 810 (a) Finding for the Present Management Alternative

The Preferred Alternative would not cause a significant restriction to the subsistence use of the YMA, since little or no such activity now occurs and the area would remain open for such usage, subject to military requirements to close portions of the withdrawn lands for training and safety reasons.

Environmental and Military Consequences of Alternative A

Air, Soil, Water and Vegetation

Harvesting firewood has and probably will continue to result in little, if any, adverse impacts to these resources. Damage to air, soil, water, and vegetation due to past ORV use has not been significant. Impacts to these resources due to fires are similar to those described in the Preferred Alternative. Past fire lines, often after use by ORVs, have resulted in soil erosion. However, the less aggressive fire suppression management for much of the YMA could permit fires which would generate smoke. Depending on wind conditions, the smoke could temporarily degrade the air of Fairbanks.

Fish and Wildlife

The withdrawn lands host a largely woodlands wildlife population. Continuation of the current management would not cause any deterioration of that habitat; indeed the practice of encouraging the military to conduct its necessary clearing operations in a way to enhance moose browse and general habitat diversity would help offset loss of such habitat to forest succession. Hunting pressures on the game species would increase as the 6th Infantry Division (Light) is fully deployed. (Military personnel who have lived less than a year in Alaska may hunt on military bases without purchasing a nonresident hunting license.)



Visual Resources

Besides the effects continued military operations have on visual resources, the most significant degradation of the visual values of the withdrawn lands would probably be from mineral material extraction. Sand and gravel sites would most likely be near the road network and near the routes of TAGS and ANGTS. However, this impact can be limited if operators properly rehabilitate the sites as indicated on page 72.

**Cultural
Resources**

Impacts to cultural resources would be sporadic and unique to each development undertaken. Under this alternative this would largely be limited to disturbances caused by military construction and training and by extraction of sand and gravel. However, a survey prior to these actions should retrieve any archeological or historical information likely to be disturbed.

Socioeconomics

The impacts of this alternative are essentially a combination of the impacts of continued recreational use, mineral material sales, and fuel wood gathering as described above in the Preferred Alternative, plus the value of existing mining on Pine Creek. The average small Alaskan placer operation added about \$77,000 to the Alaskan economy in 1985. The Pine Creek mine is probably of this size. However, miners have not filed plans of operations or notices for these claims for the last seven years.

Military

Current management places some restrictions on military activities. Minimizing training operations during September places some modest constraints on military actions. These constraints may become more critical when the 6th Infantry Division (Light) is fully deployed. The less aggressive fire suppression management for much of the YMA could permit fires which would obscure the vision and prevent training and testing, particularly for Air Force operations associated with the adjacent Eielson Air Force Base.

**Compliance
with Section
810 (a) of
ANILCA**Uses and Needs

Alternative A leaves the Yukon Maneuver Area substantially open for any ongoing subsistence use, which at present, is low to nil. Such usage is not likely to increase, since subsistence users are at some distance from the withdrawn lands and have easier access to a plentiful supply of a variety of species closer to rural villages, such as Minto and Nenana.

Section 810 (a) Finding for the Present Management
Alternative

Alternative A would not cause a significant restriction to the subsistence use of the YMA, since little or no such activity now occurs and the area is open for such usage, subject to military requirements to close portions of the withdrawn lands for training and safety reasons.

Environmental and Military Consequences of Alternative B

Air, Soil, Water and Vegetation

Due to the restrictions on access and nonmilitary activities on the withdrawal prescribed by this alternative, there would be minimal impacts to air, soil, water, and vegetation. Harvesting about 200 acres of timber over the life of the plan in conjunction with clearing necessary for the military's mission would have little impact on these resources. There is some potential for erosion if the harvesting scarifies the ground over highly erodible soils on moderate to steep slopes. Adverse impacts due to soil erosion can be controlled by confining harvesting to well drained soils on slopes of less than 30 percent and by buffering sensitive streams. Impacts to air, soil, water, and vegetation due to fires would be the same as described under the Preferred Alternative.



Fish and Wildlife

The exclusion of hunters and trappers from the withdrawn lands would cause a temporary increase in game and furbearing species not at their carrying capacity. However, once a species has exceeded its carrying capacity, natural forces would eliminate the excess.

Visual Resources

Although this alternative prescribes Visual Resource Management 4 for the withdrawn lands, the minimal nonmilitary activity permitted in the plan would largely limit impacts to those created by the Army and Air Force in fulfilling their training and testing missions. The one exception would be the effects on visual resources resulting from the extraction of mineral materials for road work from two anticipated sites. However, this impact could be limited if operators properly rehabilitate the sites as indicated on page 72.

**Cultural
Resources**

Under this alternative the effects on cultural resources would be limited to those related to the removal of sand and gravel for road work and to military use. A cultural survey prior to extraction of mineral materials or undertaking any military-related ground-disturbing action should retrieve any archeological or historical information likely to be disturbed by these operations. The thorough inventory, evaluation, and appropriate mitigation of cultural sites provided for in this alternative would maximize retrieval of the information value of cultural resources on the YMA. Excluding nonmilitary users should minimize unauthorized gathering of artifacts.

Socioeconomics

This alternative would have a negative impact on the Fairbanks area. Closing the fort to virtually all nonmilitary use would have its most obvious effect on the large number of hunters who commonly visit the fort. Besides forbidding a popular form of recreation, such a step would impact the local economy. Currently hunting and other types of recreation on the withdrawn lands help generate about \$800,000 for the Fairbanks area. Denying use of the fort would not eliminate all of this economic stimulus. A minority of the individuals may forego or curtail their recreation, but the great majority would simply shift their activities to other areas. The most likely users to stop their activities would be those who might have gone out for an hour or two before or after work for a drive or to shoot or fish.

This alternative would also make for more expensive transportation of sand and gravel for private development in the area. TAGS and ANGTS, the most likely of the private developments, could get mineral materials from adjacent lands, but transporting large quantities of sand and gravel to the portion of the gas lines passing through the post would add considerably to the cost of the projects.

Finally, by buying out the extant mining claims on the YMA the federal government would eliminate the economic stimulus they could provide. The average small Alaskan placer operation added about \$77,000 to the Alaskan economy in 1985. The Pine Creek mine is probably of this size. However, miners have not filed plans of operations or notices for these claims for the last seven years, so it is uncertain how much of a loss to the local economy their sale to the government would be.

Military

Prevention of virtually all nonmilitary access, except that for the holders of valid existing mining claims, would greatly lessen the possibility of civilians restricting military training and testing. However, although placing locked gates at all road entrances to the withdrawal may help restrict unauthorized use and protect unwary civilians, it also would be a significant inconvenience for troops which need to have ready access to the training areas. Inventorying, evaluating, and, where necessary, mitigating cultural resources in advance of any immediately anticipated development would be

more advantageous to the military than any of the other alternatives because it would lead to a shorter time lag between the time the military makes a decision to develop a project and the completion of the project.

**Compliance
with Section
810 (a) of
ANILCA**

Uses and Needs

Alternative B would close the YMA to any ongoing subsistence activity. However, at present there is little or no such use on the withdrawn lands. Moreover, it is unlikely that there would be any increased demand for subsistence use of the withdrawal, since subsistence users are at some distance from the withdrawn lands and have easier access to a plentiful supply of a variety of species closer to rural villages, such as Nenana and Minto.

**Section 810 (a) Finding for the Present Management
Alternative**

Alternative B would not cause a significant restriction to the subsistence use of Fort Wainwright's Yukon Maneuver Area, since little or no usage occurs.

Environmental and Military Consequences of Alternative C

Air, Soil, Water and Vegetation Impacts to these resources due to ORV use would be the same as described for the Preferred Alternative. There would be few, if any, impacts from the continuation of personal use firewood gathering. Sand and gravel extraction impacts would be the same as outlined in the Preferred Alternative.

Fish and Wildlife The habitat for some species would improve under Alternative C. The Forest Management Plan, to the extent it favors personal use fuel wood gathering over commercial timber operations, would do little to diversify the YMA's largely forested habitat. Such fuel wood gathering usually only thins the forest, without creating open areas for browsers or grazers. However, the Habitat Management Plan could mandate actions which would result in substantial increases in moose populations, and modest increases in other species, if it provides for extensive clearing to create more open habitat. These clearings would also help increase the numbers of nongame birds and small mammals which prefer open habitat.

The elimination of nearly all restrictions on public access to the withdrawn lands, the improvement of Brigadier Trail, and the other actions in the alternative designed to enhance recreational use of the YMA would cause a modest increase in visitor days. This would increase pressure on wildlife. Without adoption of the Habitat Management Plan outlined above, some species populations could decrease. Especially sensitive species such as wolf, wolverine, lynx, and grizzly bear could decline despite an HMP.

Visual Resources The impacts of this alternative on visual resources would be essentially the same as for the Preferred Alternative.

Cultural Resources Impacts to cultural resources would be sporadic and unique to each development undertaken. Small timber harvests and mining of mineral materials could disrupt cultural deposits. However, a survey prior to clear cutting or sand and gravel extraction should retrieve any archeological or historical information likely to be disturbed by operators. A small increase in recreational use and the easier access provided by improving Brigadier Trail would increase artifacts' exposure to unintentional and intentional disturbance.

Socioeconomics The economic effects of the Forest Management Plan under this alternative may not be substantially different from those of the Preferred Alternative because the YMA offers little opportunity to harvest saw timber or house logs. By emphasizing harvesting for personal use, it would direct the benefit from the harvests to individuals rather than to commercial fuel wood firms. The current price of \$85 per

cord of delivered firewood is testimony to the demand for the commodity in the Fairbanks area. As stated in the descriptions of the effects of the Preferred Alternative, it is uncertain how many cords would be harvested.

By encouraging recreational use, this alternative would raise visitor days by about 11 percent. The economic benefit to the area's economy from supplying the needs of hunters and other recreationists, currently nearly \$800,000 per year, would grow proportionately.

The value of extracting sand and gravel from the YMA under this alternative would be the same as for the Preferred Alternative. The value of other mining would be limited to that of the current operation on Pine Creek.

Military

By allowing the public access to the withdrawal without the Army's approval, this alternative would create a significant safety problem. Civilians, many of them armed hunters, would have less opportunity to learn where troops are training and soldiers would have great difficulty in knowing whether civilians will be in an area in which they wish to train.

Ceasing Army and Air Force training during moose hunting season would significantly impact the military's mission. Over the life of the withdrawal some training would inevitably have to be conducted in conditions which are coincident with the hunting season. This is especially the case because as the 6th Infantry Division (Light) becomes fully deployed, the demand on the YMA's training areas would increase.

Other actions could impede training. Placing road signs and mileage markers on roads and trails on this section of Fort Wainwright would undermine instruction for troops in orienting themselves in unfamiliar terrain. Similarly, erection of interpretive and informational signs would detract from such training activities.

Compliance with Section 810 (a) of ANILCA

Uses and Needs

Alternative C would leave the Yukon Maneuver Area substantially open for any ongoing subsistence use, which at present, is low to nil. Such usage is not likely to increase, since subsistence users are at some distance from the withdrawn lands and have easier access to a plentiful supply of a variety of species closer to rural villages, such as Minto and Nenana.

Section 810 (a) Finding for the Present Management Alternative

Alternative C would not cause a significant restriction to the subsistence use of the YMA, since little or no such activity now occurs and the area would remain open for such usage, subject to military requirements to close portions of the withdrawn lands for training and safety reasons.

Environmental and Military Consequences of Alternative D

Air, Soil, Water, and Vegetation With increased development in this alternative, air, soil, water, and vegetation would be impacted when more area is cleared for development-related facilities and associated roads. Brigadier Trail would be improved and permanent roads would be encouraged. Use of these roads by developers and other activities would increase traffic dust and its impacts as described in the Environmental Consequences Common to All Alternatives. Because the intent of this alternative is to maximize the harvesting of commercial timber and much of the timber occurs on the moderate to steep middle slopes, there is a high potential for erosion when logging activities disturb or remove the vegetative ground cover. Regeneration on actively eroding areas would be delayed until the soil stabilizes. To control erosion, less ground disturbance would be necessary. This may be accomplished by prohibiting ground yarding on these steep slopes and allowing only cable yarding methods which suspend at least one end of the logs. Impacts due to ORV use, mining activities, and fires would be the same as described for the Preferred Alternative.

Fish and Wildlife Alternative D has elements which can both enhance habitat and slightly increase pressure on wildlife. A Forest Management Plan which helps induce clear cutting would diversify habitat to favor browsers and grazers and certain small mammals and birds over woodland species. The improvement of Brigadier Trail and the encouragement of other road building can increase human presence on the YMA. Also, if more mining ultimately develops on the withdrawal, miners would probably account for some small increase in the take of game animals. Mining activity itself should not impact wildlife in any important way. However, if miners fail to properly dispose of garbage, they would attract animals to their camp. Bears attracted to garbage threaten human life and property and are often destroyed.

Visual Resources The impacts of this alternative on visual resources would be similar to, but possibly greater than, those for the Preferred Alternative. The types of impacts of mining and timber development are the same as those described for the Preferred Alternative, but Alternative D might increase the likelihood of such development and increase the acreage subjected to clear-cutting.

Cultural Resources Impacts to cultural resources would be sporadic and unique to each development undertaken. Small timber harvests and mining could disrupt cultural materials. However, a survey prior to clear cutting or sand and gravel extraction should retrieve any archeological or historical information likely to be disturbed by loggers and miners. The alternative's

encouragement of road building, including the improvement of Brigadier Trail, could increase access and, thereby, disturbance of artifacts. Testing, evaluating, and, if appropriate, excavating archeological site XBD-095 would preserve its cultural information.

Socioeconomics The economic value of this alternative would be similar to that for the Preferred Alternative in regard to recreation and mining. It would differ from the other alternatives to the extent that its Forest Management Plan would emphasize commercial sales of saw timber and house logs. However, the effect of such an emphasis is dependent on there being commercial quantities of these trees on the land.

Military Excluding military activities from economic control facilities would significantly restrict training if more than a handful of such facilities are established in an area. Although the military can train around a site, a proliferation of sites which must be avoided can complicate training. Facilities located near the road network would pose the greatest problem because the vast majority of training takes place close to the roads.

Opening the withdrawal to mining would affect training to the extent that mines are developed. Under this alternative some small acreages may be mined and the land on which the mining takes place and areas immediately adjacent to it largely lost to military training.

**Compliance
with Section
810 (a) of
ANILCA**

Uses and Needs

Alternative D would leave the Yukon Maneuver Area substantially open for any ongoing subsistence use, which at present, is low to nil. Such usage is not likely to increase, since subsistence users are at some distance from the withdrawn lands and have easier access to a plentiful supply of a variety of species closer to rural villages, such as Minto and Nenana.

Section 810 (a) Finding for the Present Management
Alternative

Alternative D would not cause a significant restriction to the subsistence use of the YMA, since little or no such activity now occurs and the area would remain open for such usage, subject to military requirements to close portions of the withdrawn lands for training and safety reasons.

Summary of Section 810(a) ANILCA Findings for All Alternatives

The Preferred Alternative, along with all other alternatives, have been evaluated in this chapter for their effect on subsistence uses and needs. None was found to have the potential to cause a significant restriction to subsistence uses. This is because the level of ongoing subsistence usage of the YMA is low to nil, as described in Chapter 2. Thus, to even cut it off entirely, as would happen under the most access restrictive alternative (Alternative B) would only mean that potential subsistence users would use other lands closer to their residences, just as they do now.

Unavoidable Adverse Impacts

Besides the effects of the military activities for which the land has been withdrawn which are beyond the scope of this plan, there are unavoidable adverse impacts of each alternative.

ORV use would crush some vegetation, primarily near the road network. In particularly high use areas, ORVs would also disturb soils.

Surface mining, whether for sand and gravel or for locatable minerals, would strip surface soil and vegetation and reduce wildlife habitat in the immediate vicinity of the operation. Some soil would erode and sediment would be transported into streams and lakes. Vegetative resources in many cases could require decades to fully recover.

Surface disturbing activities such as timber harvesting, construction of roads and recreation facilities, and mining would destroy or alter visual and cultural resources. These resources also would suffer from actions not within the government's discretion, such as vandalism, illegal collecting, natural erosion, and minimal wildfire suppression.



Short-term Uses versus Long-term Productivity

Harvesting a commercial timber stand under this plan would mean that that resource would be unavailable for some decades to come. Once sawtimber or house logs have been cut, it takes at least seventy years for the forest to mature again to produce these products. Deciduous fuel wood stands will become reestablished in twenty-five to thirty years. However, the practice of harvesting the withdrawal's timber on a sustained yield basis as proposed in several of the alternatives in this document would result in greater long-term productivity than the current practice of no commercial harvests.

Mining, by stripping surface vegetation and soils, can destroy commercial stands of timber. If the area is not logged before mining commences, the current timber would be lost, and another such stand would not likely reestablish itself for periods indicated in the above paragraph.

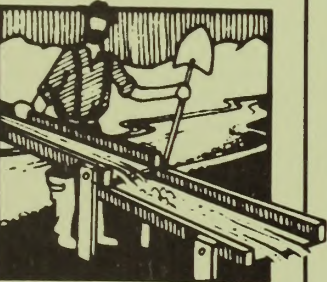
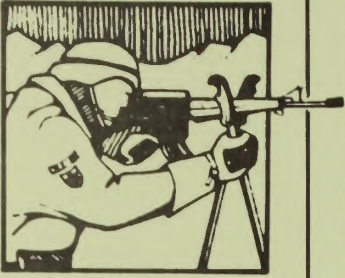
Alternative A, which allows use of ORVs on unstable soils, could have adverse long-term impacts on soils and vegetation. Regular use of ORVs in such areas can cause gullying and the loss of soil. The sliding of soil down hills can undermine current vegetation and greatly retard or completely prevent their reestablishment.

The above surface-disturbing actions could also have long-term impacts on wildlife by removing habitat. However, it is unlikely that the amount of habitat destroyed would be large enough to have a significant impact on animal populations.

Irreversible and Irretrievable Commitments of Resources

Few actions prescribed in any of the alternatives would irreversibly or irretrievably commit the resources of the withdrawn lands. This is particularly true if wildlife habitat is protected through proper mitigative actions. The removal of a mineral resource is an irreversible and irretrievable commitment of that specific resource.

CHAPTER 4 PUBLIC PARTICIPATION AND GOVERNMENT CONSULTATION



Chapter 4

Public Participation and Government Consultation

Public Participation

The planning team initiated its public participation period in mid-July 1987. On July 21 the *Federal Register* published a Notice of Intent which announced the beginning of the planning process and listed the preliminary issues and criteria. The team mailed 194 brochures describing the planning process and purpose and outlining preliminary issues and criteria to a wide variety of agencies, organizations, interest groups, and individuals on July 15, 1987. In the same week a news release sent to nearly sixty newspapers, radio stations, and television stations in Alaska began to generate calls to BLM requesting copies of the pamphlet. Subsequent contacts with the public led to the distribution of additional copies of the brochure. In addition to the initial mailing, approximately one hundred pamphlets were distributed to interested members of the public through the Steese/White District Office, the BLM's Public Affairs office in Fairbanks, and public meetings held in August 1987 in Delta Junction and Fairbanks. The mailing list for the scoping brochure is on file at the BLM Alaska State Office in Anchorage and at the Steese/White Mountains District in Fairbanks. Those receiving the brochure included:

Federal Elected Officials

Senator Ted Stevens
Senator Frank Murkowski
Representative Don Young

Federal Agencies

Air Force, Eielson AFB
Alaska Land Use Council, BLM Representative
Alaska Land Use Council, Federal Co-Chairman
Alaska Public Lands Information Center (Fairbanks and Tok offices)
Bureau of Indian Affairs
Bureau of Mines
Coast Guard
Department of Energy
Department of the Interior, Office of Regional Solicitor, Anchorage
Environmental Protection Agency

Federal Aviation Administration
Federal Highways Administration
Fish and Wildlife Service
Forest Service
Geological Survey
Government Printing Office
Institute of Northern Forestry
National Oceanic and Atmospheric Administration
National Park Service
Soil Conservation Service

State and Local Elected Officials

Governor Steve Cowper

Senators

Don Bennett
John B. Coghill
Bettye Fahrenkamp

Representatives

Mike Davis
Steve Frank
Niilo Koponen
Mike W. Miller
Richard Schultz

Mayors of Delta Junction, Fairbanks, Fairbanks North Star Borough, and North Pole

State Agencies and Organizations

Alaska Division of Governmental Coordination
Alaska Governor's Office, Washington, D.C.
Alaska Land Use Council, State Co-Chairman
Citizens' Advisory Commission on Federal Areas
Delta Advisory Committee
Fairbanks Advisory Committee
State Historic Preservation Office
University of Alaska
Agricultural and Forestry Experimental Station
Cooperative Wildlife Research Unit
Elmer E. Rasmuson Library
Institute of Arctic Biology
Land Management Office
Mineral Industry Research Laboratory
Museum
Departments of Anthropology, Biology, and Research and Advanced Study

Others

9 members of the Fairbanks Advisory Council
15 environmental and outdoor organizations
31 business and resource development organizations
14 Native organizations
33 newspapers, journals, and radio and TV stations

This scoping pamphlet included a form with a prepaid return mailer, asking for public comments. Nine individuals and organizations responded in writing to the questions posed by the brochure.

The planning team held meetings to gather public comment on the preliminary issues and criteria on August 18 and 19, 1987 in Delta Junction and Fairbanks, respectively. Approximately twenty people attended these meetings. Some of those attending shared their concerns and on-the-ground expertise through extensive discussions with team members, written responses on forms provided to address each issue, and by recording resource and use information on maps supplied for that purpose. In addition, the Steese/White Mountains District Manager and a District planning team member spoke about the plan to, and encouraged comments from, the Fairbanks Chamber of Commerce and Fairbanks affiliates of the Alaska Miners Association, the International Right-of-Way Association, and the Lions Club.

Consultation, Coordination, and Consistency

The Bureau of Land Management, which has primary responsibility for planning the nonmilitary use of the Fort Wainwright withdrawal, and the 6th Infantry Division (Light), which has carried on the day-to-day management of the land since creation of the withdrawal in 1961, jointly prepared this document. This joint effort was designed to pool the expertise of the two agencies, as well as to ensure the maximum coordination of military and nonmilitary planning for the withdrawal.

The planning team has consulted with federal, state, and local agencies to ensure consistency between the alternatives outlined in this draft report and the management of adjacent land. Those parties receiving earlier drafts of the alternatives included the Air Force, Alaska's Division of Government Coordination, and the North Star Borough.

Federal Aviation Administration
Federal Highways Administration
Fish and Wildlife Service
Forest Service
Geological Survey
Government Printing Office
Institute of Northern Forestry
National Oceanic and Atmospheric Administration
National Park Service
Soil Conservation Service

State and Local Elected Officials

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Mayors of Delta Junction, Fairbanks, Fairbanks North Star Borough, and North Pole

State Agencies and Organizations

Alaska Division of Governmental Coordination
Alaska Governor's Office, Washington, D.C.
Alaska Land Use Council, State Co-Chairman
Citizens' Advisory Commission on Federal Areas
Delta Advisory Committee
Fairbanks Advisory Committee
State Historic Preservation Office
University of Alaska
Agricultural and Forestry Experimental Station
Cooperative Wildlife Research Unit
Elmer E. Rasmuson Library
Institute of Arctic Biology
Land Management Office
Mineral Industry Research Laboratory
Museum
Departments of Anthropology, Biology, and Research and Advanced Study

Others

9 members of the Fairbanks Advisory Council
15 environmental and outdoor organizations
31 business and resource development organizations
14 Native organizations
33 newspapers, journals, and radio and TV stations

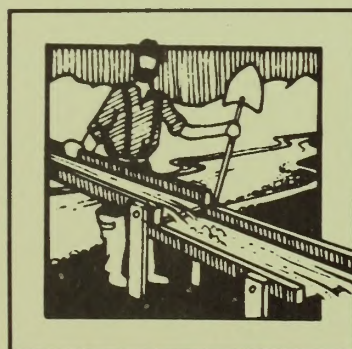
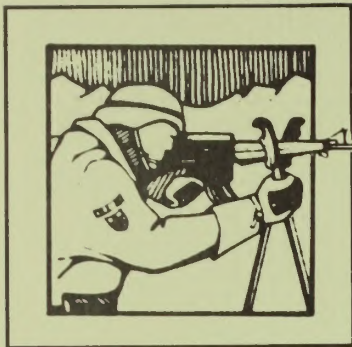
This scoping pamphlet included a form with a prepaid return mailer, asking for public comments. Nine individuals and organizations responded in writing to the questions posed by the brochure.

The planning team held meetings to gather public comment on the preliminary issues and criteria on August 18 and 19, 1987 in Delta Junction and Fairbanks, respectively. Approximately twenty people attended these meetings. Some of those attending shared their concerns and on-the-ground expertise through extensive discussions with team members, written responses on forms provided to address each issue, and by recording resource and use information on maps supplied for that purpose. In addition, the Steese/White Mountains District Manager and a District planning team member spoke about the plan to, and encouraged comments from, the Fairbanks Chamber of Commerce and Fairbanks affiliates of the Alaska Miners Association, the International Right-of-Way Association, and the Lions Club.

Consultation, Coordination, and Consistency

The Bureau of Land Management, which has primary responsibility for planning the nonmilitary use of the Fort Wainwright withdrawal, and the 6th Infantry Division (Light), which has carried on the day-to-day management of the land since creation of the withdrawal in 1961, jointly prepared this document. This joint effort was designed to pool the expertise of the two agencies, as well as to ensure the maximum coordination of military and nonmilitary planning for the withdrawal.

The planning team has consulted with federal, state, and local agencies to ensure consistency between the alternatives outlined in this draft report and the management of adjacent land. Those parties receiving earlier drafts of the alternatives included the Air Force, Alaska's Division of Government Coordination, and the North Star Borough.



APPENDICES

95 A - - List of Preparers

99 B - - Bibliography

103 C - - Index

Appendix A

List of Preparers

The following individuals served as planning team members for this Draft RMP/Draft EIS.

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Appendix B

Bibliography

Management Situation Analysis Documents

Most of the resource and management information summarized in this report is addressed in greater detail in a series of reports, called Management Situation Analysis (MSA) documents, prepared by the planning team. The titles of the MSA reports differ. They are cited in the text by the author's name, MSA, and, if the author wrote such a report on more than one resource or use, by the name of the resource or use. These documents are listed below and are available in Anchorage at the BLM's Alaska State Office, Branch of Planning and in Fairbanks at the agency's Steese/White

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Mineral Materials, Non-Energy Leasable Minerals

Butts, Billy. Recreation, Visual Resources

Cook, John. Cultural Resources

Douthit, Lee. Subsistence

Everett, Rod. Lands, Rights-of-Way

Hovland, Dwight. Soils, Water and Air

Kerns, Junior. Fish and Wildlife Habitat

Nakazawa, Lynette. Vegetation

Rowdabaugh, Kirk. Fire Management

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Appendix C

Index

Access, 3-4, 13-15, 21, 25-26, 29-30, 35-36, 64, environmental effects of, 85
Air, 9-10, 55-56, effects of alternatives on, 71-75, 79, 81, 85, 87
Air Force Technical Application Center, 8-9, 13-14, 29-30, 35
Air taxi services. *See* Guides
Alternative A, 21-23, 69, 79-80, 90
Alternative B, 25-27, 70, 81-83
Alternative C, 29-33, 70, 85-86
Alternative D, 35-38, 70, 87-88

Brochure, scoping, 91, mailing list for, 91-92
Buffer area around impact areas, 9

Cooperative Agreement (between Army, ADF&G, and F&WS), 4, 10
Cultural resources, 2, 11, 17, 22, 26, 31, 37, 62, effects of alternatives on, 72, 76, 80, 82, 85, 87-89

Fires, 61, environmental effects of, 75, 79, 81, 87
Fire management, 19-20, 23, 27, 33, 38, environmental effects of, 75, 79, effect on military activities, 80
Fish, 60, 63. *See also* wildlife
Forest Management Plan, 16-17, 31, 37, environmental effects of, 75-76, 87

Guides, 18

Habitat Management Plan, 16, 25, 31, 36, environmental effects of, 75, 85
Herbicides, 10
Hunting and fishing, 17, 22, 63-64, effects on wildlife populations, 79, 81, 85, 87, socioeconomic effects, 76, 82

Lands, 64
Laser and laser-guided weapons, 7-8

Memorandum of Understanding, 1
Military activities, 2, 7-8, 32, 36, effects of alternatives on, 77, 80, 82-83, 86, 88
Military Lands Withdrawal Act of 1986, 1, 7
Mining, 2, 9, 11-12, 18-19, 23, 26-27, 33, 38, 47, 65-66, 68-70, environmental effects of, 47, 73-76, 85, 87, 89-90, socioeconomic effects of, 77, 80, 86, 88

NIKE sites, 9, 64
Notice of Intent, 91

Off-road vehicles, 3, 9, 14-15, 22, 30, environmental effects of, 73, 79, 85, 87, 89-90
Outfitters. *See* Guides

Pesticides, 10
Preferred Alternative, 13-20, 67-69, 73-77

Recreation, 3, 8, 11, 17-18, 22-23, 32, 37, 47, 62-64, environmental effects of, 85, socioeconomic effects of, 80, 82, 86, 88. *See also* hunting and fishing, Recreation Activity Management Plan
Recreation Activity Management Plan, 32
Revised Statute (RS) 2477, 11
Rights-of-Way, 11, 18, 23, 32-33, 37, 65

Socioeconomic conditions, 53-55, effects of alternatives on, 76-77, 80, 82, 85-86, 88
Soils, 9-10, 56-57, effects of alternatives on, 71-75, 79, 81, 85, 87, 89-90

- Stuart Creek Impact Area, 7-8, 14
- Subsistence, 5, 12, 55, effects of
alternatives on, 72, 77, 80, 83, 86, 88-89
- Timber, 59-60
- Timber harvesting, 3, 10-11, 22, 26, 67-70, socioeconomic effects of, 76-77, 80, 85-86, 88, environmental effects of 73, 79, 81, 85, 87, 89-90. *See also* Forest Management Plan
- Trans-Alaska Pipeline System, 9
- Valid existing rights, 4
- Vegetation, 9-10, 15, 21, 59, effects of alternatives on, 71-75, 79, 81, 85, 87, 89-90
- Visual Resources, 15, 25, 30, 36, 63, effects of alternatives on, 76, 79, 81, 85, 87, 89
- Water, 9-10, 57-59, effects of alternatives on, 71-75, 79, 81, 85, 87, 89
- Wilderness suitability recommendation, 5
- Wildlife, 31, 36-37, 60-61, effects of alternatives on, 75-76, 79, 81, 85, 87, 89-90. *See also* Cooperative Agreement, Habitat Management Plan

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